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With the Mechanized Force on Maneuvers

By Captain Arthur R. Wilson, Field Artillery

THE May-June issue of this Journal contained a discussion of the present organization and equipment of the Mechanized Force, which under War Department orders will soon be reorganized as a reinforced mechanized cavalry regiment. Although the missions of the reinforced mechanized cavalry regiment have not yet been announced, it may be assumed that they will closely parallel those of the present Mechanized Force, and that the internal tactics that have been developed so far within the Force will be carried over into the new unit.

The primary mission of the Mechanized Force, as laid down by the War Department is, "To provide higher commanders with a powerful weapon of tactical and strategic opportunity, where the mission indicates the desirability of employing a force whose characteristics are high tactical and strategic mobility, hard hitting power, high mobile defensive power, limited holding power, and one which is capable of sustained independent action."

The effective employment of the Force, the War Department points out in a discussion of its tactical role, "is limited by certain terrain features. Careful consideration of the proper tactical missions to be assigned to it and to be assigned to neighboring troops, is, therefore, constantly necessary. * * * It is believed that its principal role will be the execution of those tactical missions presenting an opportunity for a force capable of high tactical and strategical mobility, and hard, quick, striking power. * * * Its ability to crush its way forward over highly organized ground in the face of stabilized resistance is secondary."

This conception of a mechanized force is based on its being provided with modern equipment which will give it great strategical mobility and considerable tactical mobility on favorable terrain. The present equipment of the Force, most of which will probably be included in the new regiment, leaves much to be desired; many of the vehicles, for example 1917 tanks, tank carriers, and Model 1919 self-propelled guns, are obsolete and unsuited for the purpose for which they must be used. But any unit, whether it is the Mechanized Force or a reinforced mechanized cavalary regiment will have to act as a field laboratory for the development of weapons and vehicles suited to its use. Tactical doctrine should not be predicated on vehicles available; rather the place that mechanized forces will have in the Army and in the general scheme of national defense should first be decided upon, and then vehicles and weapons developed and built with which the unit can satisfactory fulfill its given missions. Furthermore, any type of organization that is set up will undoubtedly have to be changed from time to time to meet the requirements of changed conditions brought about by improvements in motor vehicles and in weapons.

Mechanization has been defined as, "The application of mechanics directly to the combat soldier on the battlefield." But it is more than that; for in addition to applying mechanics it applies armor. It might be said then, that mechanization, from the military standpoint, is the combining of armor protection, fire power, and mechanically propelled mobility, to the combat soldier on the battlefield. A mechanized force or a reinforced mechanized cavalry regiment is an organization that combines those qualities. Such a force is mainly offensive. Its principal value lies in its *mobility*. Its success depends upon *shock*, which is secured by its speed and armor, and upon *fire power*, given by its large number of automatic weapons and its artillery.

To constitute a mobile unit in the hands of an army or a corps commander, the force must have strategic and tactical mobility. Strategic mobility includes the ability to cover long distances on roads; therefore the present vehicles of the force that are not built for high road speeds are transported on carriers equipped, whenever possible, with pneumatic tires. Tactical mobility is the ability to maintain the power of maneuver in battle and on ground leading up to the battlefield. For a mechanized force it must contemplate cross-country movements over trenches, ditches, small streams, broken ground and artificial obstacles. The Force has caterpillar vehicles and light cars which are capable of such movement.

With these facts in mind it may be interesting to follow the Mechanized Force on a strategical and tactical march and see how its elements are used in an attack. The most interesting of the many maneuvers held so far was one that demonstrated the ability of the Force to cover long distances on a strategical and tactical march, and to go into combat at the end of the tactical march. The two-day problem of June 16 and 17 is the most extended that has been undertaken; it took the Force on the 16th on a march from Fort Eustis to Camp Lee, near Petersburg, Va., and on the 17th from Camp Lee to Yorktown where it went into combat.

The Strategical March

The march from Fort Eustis to Camp Lee, via Richmond, was a purely strategical march to place the command in army reserve; it covered a distance of about 90 miles. For marches not in the presence of the enemy the Force uses a marching formation which has been adopted for ease of control in marching and for maximum flexibility in order that the best speeds may be secured and the concentration of vehicles on the road may be reduced to a minimum. The usual convoy rules which have been practiced and adopted in motorized elements of our Army are followed. In this formation the Force marches in the following order:

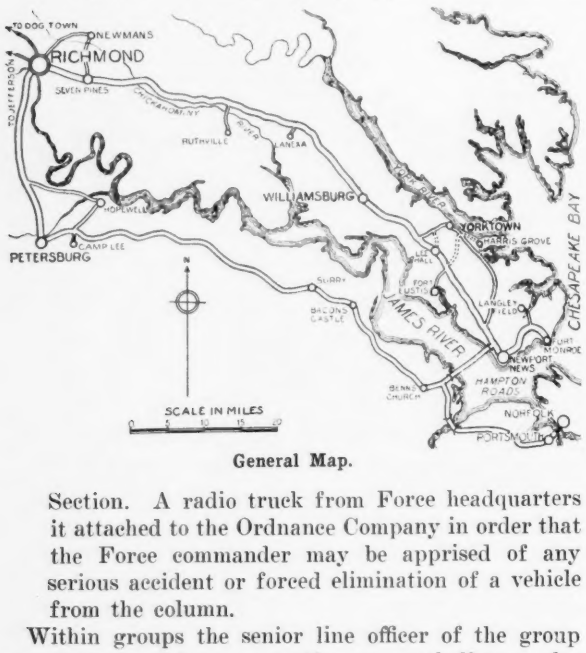
(a) The *light group* consisting of the Armored Car Troop and the Machine Gun Company, with a traffic control section of one officer and three enlisted men all mounted on motorcycles, attached.

(b) The forward echelon of Force Headquarters cruises in the interval between the light and heavy group.

(c) The *heavy group*, which follows the light group at a distance of from zero to one hour, and comprises the Engineer Company and the Tank Company.

(d) The *gun group* follows at a distance of from zero to ten minutes and consists of the Field Artillery Battery, Chemical Detachment, and Antiaircraft Platoon.

(e) The *Trains* follow at a distance of from zero to ten minutes. They include the rear echelons of Force headquarters and of all combat troops, the Ordnance Company, and the Medical Section. A radio truck from Force headquarters it attached to the Ordnance Company in order that the Force commander may be apprised of any serious accident or forced elimination of a vehicle from the column.



General Map.

Within groups the senior line officer of the group commands; and he can specify a general distance for his vehicles as about so many yards or so many telegraph poles between vehicles. When the groups halt at concentration points they habitually close into sections of five or six vehicles with half a vehicle length between trucks, and 20 to 30 yards between sections. A halt is made at the end of one hour and thereafter every two hours. No halts are for more than 15 minutes. The Force commander orders concentrations at particular points or at specified hours; and he may specify the rate of march or it may regulated by the leading group, usually the latter. In restricted areas the convoys are usually closed to one truck length to facilitate marching. Efforts are always made to have state or city motorcycle police escort the Force through cities. Contact between groups is the responsibility of the group in rear, and this is maintained by radio and by motorcycle messenger.

In all of our formations on the road we deal in distance in units of time rather than in miles. It is more appropriate for the Force and easier for the organization commanders to know that they are to march at a certain rate of speed and at intervals of so many minutes than it is to say that they should be separated by so many yards or miles.

The Force left Fort Eustis at 7:00 A. M. and at 11:00 A. M. had concentrated on the outskirts of Richmond, where it halted for 45 minutes for a motorcycle escort. At 1:30 P. M. it arrived at Camp Lee and the units were assigned bivouacs in a wooded area. Most of the march was made in a very heavy and continuous rain, but there were no accidents and all vehicles reached Camp Lee under their own power. The distance marched was 91 miles in an elapsed time of six and one-half hours, or an average of 14 miles per hour. The total actual running time was five hours, or an average speed of about 18 miles per hour.

The General Situation

Having arrived in the area designated for the army reserve of the Blue army, the Force concealed its vehicles and bivouac from possible air reconnaissance. In the problem, Virginia (Blue) was at war with Maryland (Red). The Virginia army had suffered reverses and withdrawn south of the Chickahominy and James Rivers, where it held the line Ruthville-Richmond-Jefferson. The invading Maryland army was stopped on the line Lanexa-Newmans-Dogtown. Large Blue installations, including a mobile air base (at Langley Field) were on the lower Virginia Peninsula; and these were to be moved to the south side of the James River under cover of a reinforced Blue brigade which was holding a line through Lee Hall and had its headquarters at Fort Eustis. The Virginians had air supremacy and the Blue navy controlled Chesapeake Bay.

Late on the afternoon of June 16th the Blue army commander, who had his headquarters in Petersburg, received information that a Red division was moving south through Williamsburg with a view of capturing the installations on the Lower Peninsula, which he had expected to be able to move to the south of the James River by June 20th. At 2:30 A. M., June 17th, the army commander informed the commanding officer of the Mechanized Force that the Red division would doubtless attack the Blue brigade at daybreak. He

expected to be able to move to the south of the James River Bridge, to reinforce the Blue brigade to enable it to make a counter-offensive and drive the enemy back to Williamsburg. At 3:00 A. M., a warning order was published directing that the reconnoitering detachment be ready to march at 3:45 A. M., the main body at 4:00 A. M., and the trains to await orders.

The Tactical March

At 3:30 A. M. Colonel Van Vorhis issued a field order giving the general situation and directing that the Force march at once via Virginia Highway No. 10-Benns Church-James River Bridge on Yorktown to reinforce the 1st Blue Brigade in a counter-offensive. He directed the reconnoitering detachment rapidly to gain the north bank of the James River and reconnoiter all routes to the line, Yorktown-Halstead's Point-Lee Hall, and connect with the 1st Brigade; the main body to march at a rate of 15 miles per hour, and the trains to await orders at Camp Lee.

At 3:45 A. M. the reconnoitering detachment left Camp Lee under lights, followed by the main body at 4:00 A. M., just as day was breaking. The Force took up its tactical march formation, which is used when operating in the presence of an enemy and is designed for security and to facilitate the entry of the Force into action. In this formation the elements are disposed as follows:

(a) The *reconnoitering detachment,* consisting of the Armored Car Troop, less one platoon, and an engineer reconnaissance section in light cars.

(b) Then follows the *advance guard* consisting of the Machine Gun Company, (less one platoon), and one platoon of armored cars. In this particular case the advance guard left immediately after the Armored Car Troop, but allowed the reconnoitering detachment to gain distance on it. In some cases, the reconnoitering detachment may precede the advance guard by from two to five hours. If it is considered necessary an engineer reconnaissance detachment is also attached to the advance guard. This may be desirable if the armored cars precedes the advance guard by several hours, as the condition of bridges, roads, and the like, may change as a result of the enemy's air activities. If the elements have to pass through congested areas a small traffic control section is attached to the advance guard.

(c) Next comes the *Force Commander's group,* consisting of the commanding officer, S-2, S-3, the Signal Officer, and the message center section of the signal platoon. This section, all in passenger cars, usually moves in the interval between the advance guard and the main body, but may go forward with the advance guard when action is imminent and the Force commander desires to get first-hand information of the enemy.

(d) The *main body,* under command of the executive officer, is distant from the advance guard from ten to 30 minutes. It marches in three sections, with intervals of from one to five minutes between sections. The first section consists of the forward echelon of Force Headquarters (less the Force Commander's group), one antiaircraft squad, the Tank Company, and the Engineer Company, less such reconnaissance detachments as may be with the reconnoitering detachment and the advance guard. The second section, or gun group, consists of one antiaircraft squad, the Field Artillery Battery, the Chemical Detachment, and one machine gun platoon. This machine gun platoon may be used as a flank or a rear guard.

The third section, which is the *Combat Train* comprises one antiaircraft squad, one platoon of the Ordnance Company and the Medical Detachment. If necessary, a detachment of the Supply Platoon of Headquarters Company, with only such vehicles as are necessary for the specific mission, is attached to this section. The Ordnance Officer and a trouble man ride in the interval between the second and third sections to diagnose the trouble on any vehicle that may have been forced from the moving column. The time interval between these sections is simply to facilitate marching.

(e) At the operating base in the *Base Group* which includes: the rear echelon of Force Headquarters (S-1, S-4, and the Supply Officer), the rear echelons of all combat units, the Ordnance Company (less one platoon), the Headquarters company (less detachments) and the supply vehicles of all other organizations. Since this march the Quartermaster Motor Maintenance Section of one officer and fourteen men has joined the Force. It will take its place with the Base Group and will march at the tail of the column in Formation A.

For brevity the tactical road formation is known as "Formation A" and the strategical formation as "Formation B." The most vital thing in the force is control of the various units. The feature of control can be improved by having normal formations which will cut down the necessity for actual means of control. Signal Plan A, which disposes the various radio vehicles with various units, goes with Formation A; and Signal Plan B normally goes with Formation B. As we progress in tactical development, the normal tactical formations of the Force will probably also be designated as set formations.

From a comparison of the strategical and tactical marching formations it can be seen that there is very little maneuvering necessary in changing from one formation to the other. If from a strategical formation it is desired to take up the tactical march formation, the Armored Car Company moves to the front and splits, three platoons going to the reconnoitering detachment and one to the advance guard; the Machine Gun Company sends one platoon to the gun group; the three accompanying self-propelled guns from the Field Artillery Battery go to their respective tank platoons; the Engineer Company sends whatever reconnaissance detachments are called for; the Antiaircraft Platoon splits into squads, one going to the head of each section of the main body; the Ordnance Company splits between the tail of the main body and the base; and the Medical Detachment moves up to the end of the combat group.

Tactical Uses of Various Units

Before going into the approach march and attack of the Force it will be well to summarize the missions and tactical uses of the various elements.

The armored cars provide the ground reconnaissance element for the Force, and their missions include distant reconnaissance and counter reconnaissance, security, liaison, battle reconnaissance by developing the flanks and determining the enemy's position, exploitation of the success of the Force, and covering rallying and withdrawal. It is assumed that the Force will normally have air observation to supplement the work of the armored cars. The planes can tell the armored cars where the enemy is, but cannot keep contact with the enemy or keep him under surveillance; and it is the duty of the armored cars to confirm and supplement this information, and to keep contact. There must be the closest cooperation between the two, and this can be kept up not only by direct communication between the armored cars and the planes, but between the air unit and the Force Headquarters, and thence to the armored cars. When the enemy is located it is the mission of the armored cars to keep contact, determine his flanks, and develop his position. If necessary, they have sufficient fire power to make him deploy.

The Machine Gun Company takes care of the usual missions of an advance guard and provides security when on the march. During the attack it must be prepared to take over conquered ground promptly, hold it, and exploit the success further if possible. A tank is vulnerable when halted in a zone of hostile fire, and a position once taken cannot be held by tanks alone. When the tanks have reached their objective, the machine gun company follows to the limit of the tank attack, takes up the best defensive position, temporarily consolidates it, holds, and covers the reassembly of the tanks for the next thrust. In addition to the power of its own automatic weapons and the protection of its own riflemen, it is supported by the artillery and the chemical detachments, and perhaps by the engineer company which may construct artificial obstacles. If the ground is to be held for any length of time it should be taken over by other units.

The Tank Company is the shock element of the Force; all other units are auxiliaries to it. Its attack is launched at the enemy's key position. It normally goes into action with two platoons of three fighting tanks each in the front line, and one platoon of three fighting tanks and the radio or tank commander's tank in reserve. Each platoon normally attacks in line with intervals of 100 yards between tanks, which gives a front of 500 or 600 yards. With each platoon is one self-propelled 75 mm. accompanying gun from the Field Artillery Battery.

The tractor-drawn portée Field Artillery Battery is used in the normal role of supporting artillery, but at much closer ranges than has been the custom in supporting foot or horsed units. However, the very close artillery support as well as the tactical dispositions of all other units of the Force, have been largely dictated by the limited areas of terrain which have been available for maneuver.

To facilitate command the Chemical Detachment is usually placed near the supporting artillery as a part of the gun group. It may be used to fire smoke to assist the tank attack or to blind antitank weapons, or it may fire high explosive shells.

The Antiaircraft Platoon splits as described above when on the march and pulls out of column to go into action. When the Force is attacking, it takes up a position to protect the carriers. In addition to the protection offered by this platoon, each vehicle in the Force is to be provided with automatic weapons for defense against low-flying airplanes.

In addition to providing detachments for road reconnaissance and doing the inevitable field engineering that goes with any force, the Engineer Company may be used to provide ground security for the carriers or at the termination of an attack to construct artificial obstacles and put up wire to aid the machine gun company in consolidating and holding a position taken by the tanks.

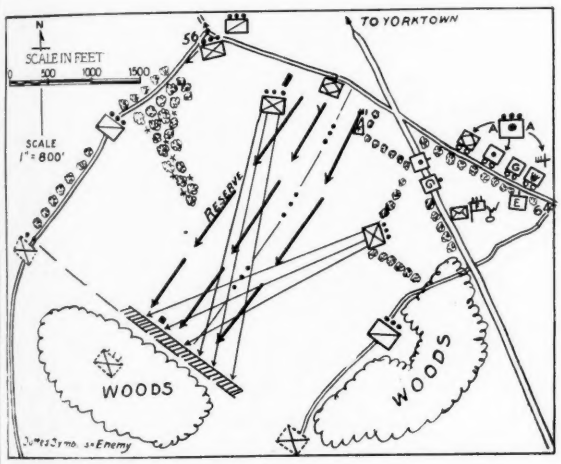
It is the carriers that tie the hands of the Force commander at the present time. With the present equipment he always has to be thinking in terms of protection of his carriers; he is forced to base his maneuver on the protection of this dead weight in its park. It is similar to the led horses in the Cavalry—the burden increases as the distance between the carriers and the fighting force increases. For this reason the carriers are pushed as far forward as possible before the tanks are detrucked. The detrucking of tracklaying vehicles is a great handicap to the mobility of the Force. High mobility implies that there shall be no time lost in deploying. The Force should be able to go directly from its march to its approach and combat formations without loss of time. With carriers, the tanks are delayed in unloading at a critical time between the march and approach formations. They are stationary on the road while unloading, and are very vulnerable at that time to air attack and artillery fire. Not only is there the problem of defense, but the problem of parking is a great one. The large tank carriers take room; it takes 47 feet of radius to turn one. They have practically no cross-country ability, therefore the tanks have to be unloaded near good roads.

Entry Into Combat

On the march into the maneuver area near Yorktown, the armored cars reconnoitered the road to the James River Bridge and reported by radio a bad stretch of road about 200 yards long six miles west of Surry. The main body was delayed one hour in this stretch of clay which had been recently plowed for road construction and was soft from the rains of the night before. It was necessary to unload all tanks and have them pull the carriers through. All other vehicles except the tank carriers negotiated the bad stretch without trouble.

After crossing the James River Bridge the armored car platoons reconnoitered all roads leading up the

Peninsula, located the enemy's outposts, and the troop commander reported to the headquarters of the 1st Blue Brigade at 7:00 A. M. At 8:00 A. M. he was given a situation map showing the enemy's dispositions, and information that the Red division had attacked at daybreak with the main effort directed at Halstead's Point and was evidently trying to envelop the right of the Blue brigade. The brigade commander directed the Mechanized Force to seize Yorktown and the high ground in that vicinity. An airplane from Langley Field, attached to the Force for the maneuver, hooked the map and message from an armored car at Fort Eustis at 8:00 A. M., and by 8:10 A. M. dropped them to the Force Commander. He was directly across the James River from Fort Eustis near Bacon's Castle, moving toward the James River Bridge, but was more than 40 miles away by road. With the situation to date in his hand, the Force Commander radioed the plane at 9:00 A. M. to direct the trains at Camp Lee to march to the James River



Special Map.

Bridge. The message was dropped from the plane to the trains.

By 9:40 A. M. the main body had reached the south end of the bridge, and there the Force Commander received additional information of the enemy from the Blue brigade commander, who directed an attack on the enemy's left and rear. The advance guard established a march outpost at the north end of this four and one half mile bridge, and by 10:00 A. M. the main body had crossed and started its advance on Yorktown. From that time on he received continuous information from his armored cars, both by radio and by motorcycle messenger. The enemy was outlined by dismounted men.

At 10:20 A. M. the advance guard made contact with the armored cars two miles south of Yorktown. The Force Commander, now with the advance guard, received the latest information of the enemy which stated that it was a strong flank guard of a division which was in position prepared to deny the advance of the Blue brigade. He decided to attack at once, and immediately sent word to the main body to concentrate at Harris Grove, prepare for action, and the organization commanders to report to him. Upon their arrival the Colonel, after giving the situation up at that time, issued his attack order as follows:

The Force deploys to attack at once.
Preparation for action on that road (pointing to dirt road), carriers remain in place.
Line of departure: This road (the macadam road) from this point to the west edge of that field (pointing to the enemy outlined).
Direction of attack: South, pointing.
Time of attack: At my order.
First objective: The hostile position at the edge of the woods.
Main effort: The tank company less one platoon, which will remain in reserve on this road.
The advance guard will support the attack from its present position until its fire is masked, then load and prepare for forward displacement.
Battery and Chemical Detachment support the attack from initial positions on that road near the corner of that field (pointing).
The Engineers in reserve at the carriers and provide ground security for the carriers.
Antiaircraft provide security for the carriers and for the C. P.
Service elements at BM 64.
C. P. in the edge of that woods (pointing). I will remain here.
Any questions?
Move out.

The armored cars had developed the enemy's flanks and had a platoon in observation on each side and one north of RJ 56 guarding the approach from Yorktown. The Machine Gun Company had gone into action, two platoons each with a cross fire on a half of the enemy's line, and one platoon covering the north flank of the Force. The tanks attacked at 11:15 A. M., the two platoons striking at the center of the position. When they had nearly reached their objective the reserve platoon was thrown in to extend the line to the right. The tanks, attacking over a stretch of about 1000 yards, were exposed to hostile fire for about three minutes. As soon as the first objective was reached the Force Commander received word by radiophone. He then ordered the tanks to reorganize and pursue the enemy through the trees to the back Yorktown road; the machine guns were ordered to take over the ground, and the battery and chemical detachments to displace forward in order to follow the tank attack and be prepared to give close support. He went forward in an armored radio car to the position that was being consolidated. The machine guns were loaded into their carriers, these ran across the field to the former enemy line where the machine guns again went into position. The Field Artillery Battery and the Chemical Detachment followed closely, prepared to go into action again. All objectives having been taken and the enemy dispersed the Commander ordered the tank and artillery carriers to move forward by the road; Yorktown road, RJ 56, back road to Yorktown, and entruck the track laying vehicles for possible further movement.

Conditioning Horses

By Captain William H. Dean, Veterinary Corps

IN considering the subject of conditioning horses for any contemplated work, I would first like to define the term "in condition," as it is understood by the author. For practical purposes a horse is in condition when he is in that state of physical fitness that enables him to perform satisfactorily and without injury the work for which he is conditioned.

It must be realized at the start that it is impossible to prescribe any rule of thumb method of training for all horses. There are, however, certain underlying principles which should govern and which must be followed generally to assure success. The purpose of this article is to set forth and discuss briefly these general principles. Let me caution that each horse which is to be conditioned must be treated as an individual. In conditioning horses, as in any other undertaking, a blanket hit and miss method of training is doomed to failure.

Selection of Horses

Often it is impossible to select horses for any particular contest. We must use those which we have in our military organizations. Where selection is possible, always choose a serviceably sound horse of good conformation and see that the horse is of the type necessary to perform the particular work which he will be called upon to do. One of the most important points of conformation to secure is a long, sloping shoulder. A straight shoulder will often result in undue strain and injury to the horse in prolonged hard work.

There will be no attempt made to define what we understand by "good conformation." This is of general knowledge to all horsemen and varies in different types of horses.

Age of Horses to be Conditioned

The age of horses influences the kind of training and the length of time necessary to put a horse in condition. As a rule, the younger the horse the longer it takes to condition him. After a horse has once been *"in condition"* and let down for several months, it is much easier to again put him in condition than one that has never reached this stage of physical fitness.

Young, immature horses require more time and careful work than mature horses. By young horses, I mean those from three to six years of age. When horses have obtained their maximum growth, which averages around six years, the bones of the legs have developed sufficiently to permit hard work. They may, therefore, be given harder work and can be put in condition in a much shorter period of time.

Care and Feeding

I prefer always to feed grain four times a day. It does not matter whether the horse is getting six pounds of oats or twelve, it is preferable to divide his daily allowance into four parts, the largest amount of grain being given at the last daily feed.

I believe the horse will obtain more nourishment from the same amount of grain divided into four feeds daily, than if fed a like quantity in three. In this way the stomach is seldom, if ever, overloaded; this allows the grain to remain in the stomach a sufficient length of time to permit the stomach and gastric juices to act properly on the food before it passes on into the intestines for further digestion and absorption by the blood.

A small amount of hay should be fed one-half hour before the grain feed in order to take the edge off the appetite and start the flow of gastric and intestinal juices. However, the bulk of the hay ration should be fed at night to allow the horse plenty of time to eat and to properly digest his food.

The amount of feed prescribed for each individual horse will vary. Some horses will keep fat on six pounds of grain and other horses of the same size will remain thin, no matter how much you feed them.

The importance of water cannot be overestimated. Horses should be watered at least four times a day, or better than this is to keep water in the stall at all times.

Condition of Horses to Start Training

Horses should be in good flesh at the start of conditioning, as it is very difficult to build a horse up in flesh and condition him at the same time. *It is much easier to convert fat into muscle than to build up muscle from feed and work.*

Amount of Work

The amount of work necessary to condition a horse will depend on many things, *i. e.*, whether he has been having a reasonable amount of exercise regularly, standing idle in a stall, or been in pasture. Of course, a horse that has been in a stall or on pasture will require more time than one that has been doing regular troop duty.

The following is the schedule of training I prepared for the conditioning of horses for the 2d Cavalry, 13th Cavalry, Battery "D", 18th Field Artillery, and Academic Division of The Cavalry School in preparation for a one hundred mile march which was to have been made in twenty-four hours.

This was submitted as a guide and was followed except on days when tactical demonstrations were staged by these organizations for the Cavalry School. In some instances the work on these demonstrations was more than the training schedule called for and sometimes less.

The one hundred mile march was made very successfully in twenty-three hours and ten minutes.

The following is the schedule for draft horses, riding and pack:

Conditioning for Draft Horses. Since the first of February animals in the battery had an average of about ten hours per week in harness, so that all animals were fairly hard but a bit fat when training for the forced march began. On all marches particular attention was paid to road discipline and to the care of animals at the halts. Enough draft over soft rolling terrain was given to insure building up the hind quarters and loins. Water and salt were available at all times in the corral. When the animals were tied in they were heavily bedded and the mangers kept filled with hay. Grain was fed four times a day. One-half bale of alfalfa per section was fed the first three days, then increased to three-fourths bale for ten days, and finally to a bale until three days before the march when prairie hay alone was fed. The following schedule was used as a guide:

1st Week.
2 hours daily over level roads with one 5 minute trot period in each hour.
Equipment: stripped saddles.

2nd Week.
2½ hours daily over rolling roads with one 7½ minute trot period in each hour.
Equipment: stripped saddles.

3rd Week.
2½ hours daily over rolling roads with two 6 to 7½ minute trot periods in each hour.
Equipment: stripped saddles.

4th Week.
3 hours daily over rolling roads and open fields with two and three 7½ minute trot periods in each hour.
Equipment: Caissons loaded with sand.

5th Week.
3½ hours daily over rolling roads and open fields with three and four 5 to 7½ minute trot periods in each hour.
Equipment: Caissons loaded with sand.

6th Week.
3½ and 4 hours daily, over rolling roads and open fields with three and four 6 to 7½ minute trot periods in each hour.
Equipment: full load on carriages.

7th Week.
3 and 4 hours daily over rolling roads and open fields, with three and four 6 to 10 minute trot periods in each hour. Three days of week only.
Equipment: full load on carriages.

Horses were given rest all day Sunday.

The conditioning period for pack and riding horses of the 2d and 13th Cavalry was approximately seven weeks, and the following schedule was used as a guide:

1st Week. Mar. 9 to Mar. 14.
2 hours slow work at a walk daily with one 5 minute trot period in each hour.
Equipment: stripped saddles.

2nd Week. Mar. 16 to Mar. 21.
2½ hours daily slow work at walk up and down hills (not too steep) with two 7½ minute trot periods (1 each hour).
Equipment: stripped saddles.

3rd Week. Mar. 23 to Mar. 28.
2½ hours daily slow work at walk up and down hills with two 7½ minute periods of trot each hour.
Equipment: Began at this time to gradually increase the amount of load carried.

4th Week. Mar. 30 to Apr. 4.
3 hours daily slow work at walk with three 7½ minute periods at trot each hour. Additional parts of the full pack were added during this week.

5th Week. Apr. 4 to Apr. 11.
3 hours daily with four 7½ minute trot periods during the work hours.
Equipment: Field pack was carried at this time. A march of 20 miles was made on April 9th.

6th Week. Apr. 13 to Apr. 18.
3 hours daily with four 7½ minute trot periods each hour.
Equipment: Full pack.
One march of about twenty-two miles in three and one-half hours was made on April 15th, and twenty-nine miles in four hours and fifteen minutes was made on April 18th.

7th Week. Apr. 20 to Apr. 22.
3 hours daily with three 7½ minute trot periods.
Equipment: Full pack.
Horses were given complete rest on Sundays and one hour under the pack Saturdays.

The above outline of training was prepared especially for military horses that on the march should not move faster than a trot, except in emergency when it may be necessary to gallop.

Indications of Condition

Of course the ultimate test of condition is the ability of the animal to pass a test without undue fatigue.

There are, however, certain indications of the condition of a horse which may be readily recognized. A horse in good condition presents the general aspect of good health. He has alert eyes and ears; a fine glossy coat; soft, flexible skin; good, supple muscular development; well let down in the flanks; a good covering of flesh; a watery sweat which does not lather; lack of undue thirst after hard work; a quick return to normal breathing after severe exercise; a good appetite, and a free, supple, springy gait.

The tendons and joints should be smooth and clean, and the legs should neither puff nor swell after hard work.

Summary

1. The transformation of fat, flabby flesh into hard, tough muscle cannot be forced.

2. Each horse presents an individual problem in feeding and exercise.

3. In the beginning work should be light and feed small.

4. The rate at which work and feed may be increased depends upon the response of the individual horse.

5. Exercise should be light at first and increased as the animal grows stronger.

6. Exercise should never be such as to cause undue fatigue.

7. Tired, overworked muscles are often the cause of sprained tendons or ligaments.

8. Too much fast work runs off flesh and does not change soft flesh into muscle.

9. Treat your horse as you do yourself and you won't be far wrong.

10. The sole recipe for conditioning is a judicious combination of sufficient good food and sufficient healthful exercise, continued over an extended period.

Logic

From the British Cavalry Journal, October, 1930

I.

THE six-wheeler gave one last despairing roar as she topped the rise and took the down gradient on the far side; the driver changed gear with a crash like the slamming of a steel door, and conversation once more became possible.

"There you are sir, that must be Cavalry Division Headquarters, them red and green lights," and the driver pointed in to the valley below already dim with the blue haze of the short Eastern twilight.

The one-armed war correspondent shifted his seat and stretched his legs. Before him was the valley and beyond it a ridge of gravelly hills, the tops of which were coloured a faint orange tint by the setting sun. It was already almost dark in the valley, and innumerable little points of yellow light began to appear, whilst from the growing darkness below came an indefinite murmur, the accumulation of many sounds, men's voices, the neighing and stamp of horses and the hundred other sounds of a bivouac.

At the bottom of the slope the road led through orange groves towards a straggling village. As the six-wheeler passed through these orange groves the war correspondent saw that they were full of vehicles, light tanks, armoured cars and six-wheelers, all covered with branches taken from trees.

"What does 12 A. Cav. stand for on these tanks and armoured cars?" he asked the driver.

"Well, sir, they belong to the 12th Armoured Cavalry. The 3rd Cavalry Brigade must be here; these cavalry brigades now have two horsed regiments and an armoured regiment, you know, sir, and this brigade has the 9th and 17th Cavalry, they are the horsed regiments, and the 12th Armoured Cavalry which you see here. They all used to be Lancers, this brigade, before they were re-organized; I know because me brother is a corporal in the 9th."

A moment later the six-wheeler drew up before a group of khaki-coloured tents, pitched in an enclosure on the outskirts of the village. The War Correspondent was trying to explain to a sentry who he was and what he wanted when a Staff Officer appeared out of one of the tents and, as he saw the War Correspondent, came quickly forward to seize his one remaining hand and say, "Why, Harry, old boy, what on earth has brought you here? I thought you were safe with your old sheep in New Zealand."

"So I ought to be if I had any sense, Charles, but I came back to this war, failed to get passed fit because I am short of a hand, and now find myself out here as a scribe whose job is to bring humour and knowledge to the British breakfast table by recounting what you are doing in the Great War Daddy, as we used to say in the wars of our youth. Now, Charles, tell me what I am to do."

"Well, the G. O. C. was warned we were to have a correspondent for this show. You know the policy in this war; I think we have realized that the secrecy business can be overdone, especially as regards suppressing the names of units which have done well. So you can go where you like and write what you like as long as you let us see it before you send it off. You see the idea, 'tell the bints and so hearten the chaps.' Now for a drink and I'll tell you how we propose to make old Popski sit up."

The War Correspondent had already noticed that the enemy was usually referred to in terms of apparent affection and esteem as "Popski" just as "the most formidable soldiery in Europe" was known as "Jerry."

Charles, the G.1 of the Division, was as good as his word, and, after suitable refreshment, pulled a map towards him and explained.

"Here we are and here are the 1st and 2nd Brigades. We have been going all out for four days turning Popski out of successive positions. Popski is not much of a lad for the open, and hates tanks, and so far has gone at the first threat to his flanks; but now he has got his flanks on good anti-tank obstacles, the hills and the swamp you see here on the map, and is a very different bird once he has scratched a bit of cover and got his machine guns and anti-tank weapons into play. Well, G. H. Q. say we have got to push on and get this bridgehead over the river here which they are so keen on. Popski has got the best part of two Infantry Brigades strung out in front of us, and I fancy doesn't think a mere cavalry division will dare try and turn him out. He is going to get the shock of his life tomorrow morning."

"Well, I am sure I hope so, Charles; but you won't mind if I reserve my enthusiasm. The last contest we took part in didn't exactly teach one to be enthusiastic about offensives, and this looks a bit rash to me unless you are going to spring a surprise."

"Righto, Harry, wait and see; I do believe we have got the goods this time. Now where would you like to go? If you have no special wish I suggest, as you are an old horse gunner, that you go to 'the Troop.' They are with the 1st Cavalry Brigade, and Bonzo has got them now; he was with you on the Somme, wasn't he?"

So off went the War Correspondent to look for his new home; musing to himself that all wars were much the same; eternally looking for something in the dark and wondering where you were going to spend the rest of the night.

II.

Dawn next morning found the War Correspondent picking his way in the half light to the top of a low gravelly ridge, where he found the O. P. of the Troop and the redoubtable Bonzo himself busily engaged in defeating the chill dawn air with a thermos of hot tea.

"If Popski hasn't gone in the night you are going to see some show," said Bonzo. "Ah, there go the patrols now to feel for him."

It was now almost light and the War Correspondent could make out an armoured car stealing along the road which led down from the crest where they were across a valley and up a ridge opposite. This ridge was about a mile away and was covered with patches of scrub and stunted trees, an occasional outcrop of rock and a few dirty white farms and patches of cultivation. The armoured car was across the valley now and had begun to climb the hill, when from the silent ridge opposite came a sharp double report. The armoured car seemed to break in two in a cloud of black smoke and then burst into a sheet of flame as the petrol caught fire.

"Did any of you chaps see where that anti-tank gun fired from?" said Bonzo. "This flashless propellant is the devil; they are just as hard to spot as machine guns. I see the cavalry patrols are now going across; that is in case Popski has left a single anti-tank gun and escort covering the road to stop armoured cars as he often does. No, he's there all right this time. See if you can spot where any of those machine guns are firing from."

For, in what seemed but a few seconds, the cavalry patrols all along the front were galloping back and, after a sudden burst of machine gun fire, the ridge was as silent as before.

"Now for second act," said Bonzo. "You are going to see tanks and cavalry attacking together under cover of a thin smoke screen, about one gun every hundred yards; the mechanized batteries are doing that."

"Hold on," said the War Correspondent, "I seem a bit out of date; do you know I don't even know what you are armed with."

"Oh, the mechanized batteries have the 3.7 gun-how. and we who do close support, the 3.7 light how.; all the same shell."

"But why are you still horsed?"

"Can't explain that now. Look out, the balloon's going up."

As he spoke the still air of the early morning was broken by the thud, thudding of guns behind them, and then the swish and scream of shells going over their heads; the old familiar sounds of the opening of the barrage. Once again the War Correspondent felt that thrill which once experienced is never forgotten; a feeling of wild excitement and enthusiasm as if the shells were shrieking at him "Come on, come on, we've got them;" as if some irresistible impulse was urging everything forward, the steel in the air, the man on the ground.

Then on the slope opposite round white balls of smoke sprang up, grew taller, bulged a little, then toppled over and drifted away across and up the hill-side on the gentle breeze. Almost before the first smoke shell had changed from a ball to a drifting cloud another and another arrived at the same spot. Soon the ridge opposite was almost blotted out, not by a thick screen but by an ever-changing veil, a tantalizing veil; in one place the smoke drifted till it became but a thin haze, and the outline of the ridge began to appear again; then more shell would arrive and the thin haze became again a woolly billowing cloud, the edges tinted with pink from the early sun.

The War Correspondent was trying to picture the enemy anti-tank gunners peering into this ever-changing veil, now blinded, now almost seeing clearly, now baffled, when his attention was distracted by the roar of engines from behind.

The light tanks of the armoured regiment came over in waves. As they topped the crest they seemed to hang for a moment and then go bucketting and roaring down into the valley. Half way down the slope was a wire fence, and this they seemed to tear up bodily and carry away in shreds without a pause in their career. Close behind them came wave after wave of horsemen, all widely extended and all at full gallop. The pace of this attack was bewildering; one minute tanks and horsemen were crossing the ridge, the next they were disappearing into the drifting smoke on the opposite slope.

"Here come the moppers up," shouted Bonzo.

These latter horsemen were in little groups with machine guns in pack, and here and there a tank to deal with any enemy still holding out. They also disappeared into the smoke which was now becoming only a haze as the barrage moved up over the ridge. Through this haze the War Correspondent could make out the moppers up, sometimes shepherded by a friendly tank, chasing fugitives and collecting prisoners, or pressing on over the crest in the direction from which the sounds of the barrage still came. To the right, in front of a group of buildings which lay in a slight hollow, were three derelict tanks from which fumes still poured; whilst from all round came the rattle of musketry and the occasional chatter of a machine gun. Here was evidently a post holding out, and the moppers up were working round it dismounted.

"This is where I come in," said Bonzo. "H. E. 106 all three degrees right of zero," and followed it by more of the strange incantations of his trade.

The War Correspondent was admiring the accuracy with which Bonzo's little howitzers were planting round after round into the buildings, when a quiet voice at his side said, "Well, what do you think of this?"

He turned to see the spare figure of the Cavalry Brigadier beside him. "Yes, here you see the logical development of Klip Drift and El Mughar. Yet it is surprising how long it took us to realize the power of the combination of tanks and horsemen. We tried tanks and infantry; that was no good because of the difference in pace. Then we tried complete armoured brigades and found that their operations degenerated into mere raids; and raids in a country as devoid of night clubs as this are not much use. Now you see the ideal, the horseman and the machine combined in one arm so as to get real co-operation. It is after all only logic!"

(Continued on Page 64)

Chasing the "Transvaal Wolf"

By Lieut. Col. William W. Edwards, Cavalry (DOL), Asst. Chief of Staff, 103rd Division

"SLIM PIET" CRONJE, known to the British as the Transvaal Wolf, had in his veins a strain of blood from those inflexible French Huguenots who at the Revocation of the Edict of Nantes gave up home and fortune, left their country forever and went to the far corners of the world. Bred to the wild vicissitudes of the South African Veldt, he was among the doughty burghers who stopped the Jameson Raid. On the outbreak of the Boer War his natural qualities of leadership brought him to command in the western theatre. Lord Methuen, Kitchener's predecessor, had felt his fangs at the bloody battle of Magersfontein. And there at bay, he still crouched when "Little Bobs" landed at Capetown.

In relieving Kimberley, French passed around Cronje's left flank. The march northward of the British Cavalry division, under General French, depended, however, upon a more far reaching consideration than the relief of Kimberley alone. It was the direct outcome of Lord Roberts' fine conception of a strategical situation, the only solution for which was the independent employment of cavalry. Although the relief of Kimberley was French's immediate mission, "Little Bobs" designed it as a threat at Cronje's flank, the main objective being the ultimate relief of another British beseiged town, Bloemfontein. The Kimberley movement cleared the ground on the British flank and put Cronje at Magersfontein in a very uncomfortable position, for the heavy British infantry columns which followed close upon the heels of the cavalry would cut off the Boer communications with Bloemfontein. If the relief of Kimberley had been delayed it would have given Cronje the opportunity to have withdrawn his force to the northward, where he would have been favorably placed for operating against the British flanks and communications. The task for Lord Roberts before marching on Bloemfontein was to capture or destroy Cronje's army.

On the other hand, the problem of General Cronje with the relief of Kimberley was how to escape from the toils which were fast spreading round him. Lying on the defensive along the Modder, he now found himself faced by a large force of British infantry collected by that genius for preparation and organization, Lord Kitchener. The forces of Lord Kitchener had concentrated at Ramsdan. French's cavalry had scarcely left Klip Drift before two British infantry divisions occupied it.

About the same time the Boer position at Jacobsdal was attacked and captured. The crafty and tenacious Cronje had the Boer fear of being cut off, which was an hereditary instinct from fathers who had fought on horseback against enemies on foot. Cronje, when he got the rumor of the English upon his flanks, being prompt to realize his danger, lost no time in deciding upon the effort he would make to save himself. The very day upon which Kimberley was relieved—February 15—alert and resourceful, he determined to abandon his position in a bold attempt to break through the converging English columns, and restore his communications with Bloemfontein.

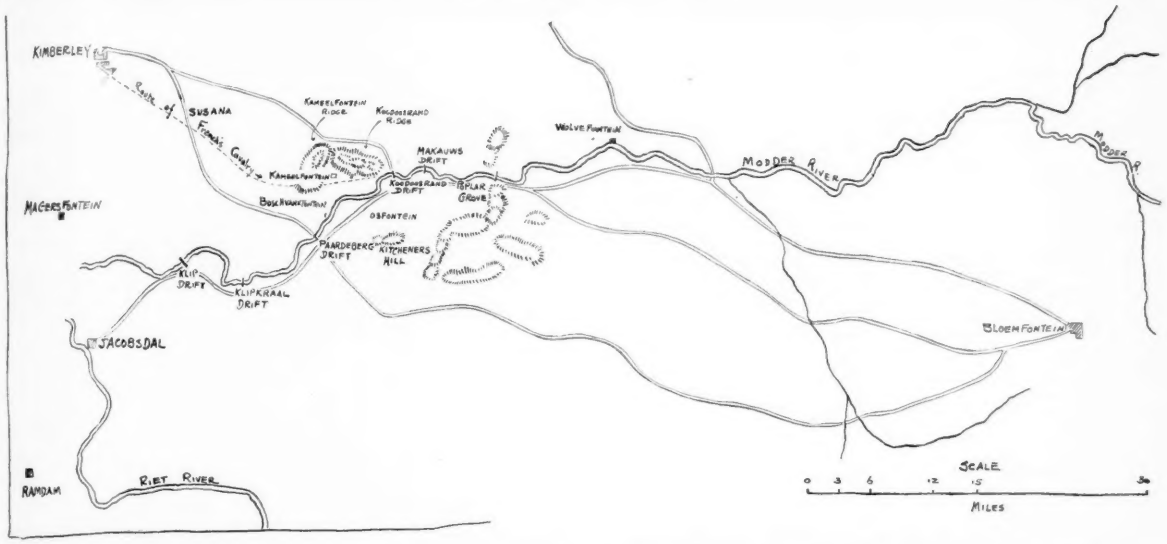
His big guns were despatched to the west, thence escaping around Kimberley, north across the Vaal; while the Old Wolf himself with the remainder of his forces made a hasty dash eastward. With furious speed he drew in his right wing and then one huge mass of horsemen, guns and wagons, in a whirl of dust, he swept through the gap between the rear of French's cavalry bound for Kimberley and the head of the British infantry at Klip Drift. There was just room to pass and there he dashed with the furious energy of a wild beast rushing from a trap.

The movement was miraculously well timed. A rush of thirty miles took him across the plain that stretches down to the Modder River at Klip Drift. So closely did he cross the track of the cavalry in their march to Kimberley that their trail was still fresh upon the open sandy veldt. Cronje depended upon the dark night of February 15 to veil his movement. Had he been a little quicker he might have gotten away before the British were aware of it. But unfortunately for him, he would not leave the ponderous wagons which weighted him down.

A huge rolling cloud of dust on the northern veldt told Kitchener's outposts at Klip Drift more plainly than words that Cronje was slipping through his outstretched hands. Lord Kitchener at once unleashed his mounted infantry in direct pursuit by the south bank of the river to seize Klip Kraal Drift, the next passage beyond Klip Drift, while a brigade of infantry sped along the northern bank of the Modder to cling to the right haunch of the retreating Boers.

Cronje had made a night march of thirty miles from Magersfontein and the oxen which he used for purposes of draught were not fitted by nature either for the speed or endurance of a forced march. His wagon bullocks were practically exhausted. It looked very much as if the only chance which Cronje had for escape was by abandoning his guns and stores. Lord Kitchener, soon close enough to harass his retreat, found the grim old Transvaal Wolf again with his teeth flashing over his shoulder.

South Africa is a land of vast reaches, of boundless plains seamed with ridges and traversed at wide intervals with water courses or ravines and gulches. In other words, the country decidedly favored the defensive tactics of its Boer inhabitants. Undoubtedly that was one of the main contributing factors why the Boers



continued on the defensive during the entire period of the war. Constantly avoiding battle cannot of course possibly win ultimate military success and the Boers threw away their best chances of success by failing to observe this simple military principle.

Being adepts at defensive fighting, it was only to be expected that the Boers would prove themselves past masters in the tactics of the rear guard action. Rear guard, effectively disposed and skillfully handled, may baffle and render of little or no avail the most energetic and determined pursuit.

As Cronje's riflemen paused to fire successive volleys into the ranks of their pursuing enemy, meantime retiring leisurely from kopje to kopje as they did so, the Boer retreating column was hourly gaining headway towards Bloemfontein. They suffered so little delay indeed that by nightfall on the 16th in spite of their slow moving oxen the Boers were well ahead of the British on the north bank of the Modder. The sight of the white tilted wagons in the glorious virile air of the South African morning fading into the distance, fired the blood of every one of Kitchener's mounted infantrymen to put forth every effort of which he was capable. The kopjes ahead, however, were held by Boers and the broad plain across which the British were hurrying was swept with a storm of bullets. All day the grim and weary Boer rear guard stalled off the fiery advance of the British infantry and at nightfall the wagons were still untaken.

The pursuing British force to the north of the river was numerically inferior to the Boers they were pursuing so that at best they could simply hope to retard the Boer retreat. Had Cronje known what would eventually happen he would probably have left his guns and wagons and by a swift dash over the Modder brought his army away in safety. On the night of February 16, Cronje lay on the north bank of the Modder, his stores and guns still intact, no enemy in front of him and Kitchener's mounted infantry behind. It was necessary for the Boer General to cross the Modder River in order to be on the line for Bloemfontein, which being then in the hands of the Boers, was his haven of safety. As the course of the Modder tended to the northward, the sooner he could get across the better. The formidable Modder here ran between very deep banks, which were so steep indeed that they might be described as cliffs. There was no chance whatever for a Boer horseman, far less a Boer wagon, to cross at any other point save where the traffic of years had worn sloping paths down to the shallows. The British knew, therefore, exactly what places had to be blocked. The nearest of these crossings or "drifts" along the river route taken by General Cronje was Klip Kraal, only a mile or two distant, the next, Paardeberg and the next the Koodoosrand, each about seven miles from the other.

Giving his weary army some hours rest after twenty-four hours of marching and fighting, he at length reluctantly abandoned seventy-eight of his wagons, and pushed on before daylight for the farthest of the three drifts which went by the name of "Koodoosrand." If Cronje could reach and cross that drift he was safe. Meanwhile the British mounted infantry had galloped round from the north to the south of the Modder crossing at Klip Drift and securing the southern end of Klip Kraal.

Thither came one British infantry brigade soon followed by another, which finding that Cronje was gone, had marched along the northern bank of the Modder to the same spot. With Klip Kraal Drift safe in their hands, the mounted infantry pushed on at once to the southern end of Paardeberg Drift; here with the fatigue of incessant fighting and marching was found the limit of endurance of troops not acclimated to the country, for mounted infantry have always lacked the soul of cavalry. Koodoosrand Drift was beyond Kitchener's reach.

The British mounted infantry being completely fagged by a stern chase, it had become evident that unless General Cronje was headed, his pursuers would be shaken off.

At the same time that the British mounted infantry

had been sent to seize Klip Kraal, the foresight of Lord Roberts had despatched a messenger to General French, who had just returned from an indecisive action north of Kimberley. French had arrived at Kimberley, with his horses dead tired and seemingly absolutely incapable of any further exertion. On the next morning, at three o'clock two out of his three brigades, afoot, were hard at work in their endeavor to capture one of the Boer encircling positions. That same evening the order came from "Little Bobs" to General French to start immediately from Kimberley as the forlorn hope to head off the elusive Cronje.

So terrible had been the hardships which French's horses had been called upon to perform that out of three thousand, there could be mustered only two thousand emaciated mounts for the expeditionary force now hastily assembled. The Duke of Wellington once said: "In peace time treat your charger as if he were worth five hundred pounds, but in war, as if he were not worth a farthing."

French knew that a swift and trying march was before him, the success of which was dependent upon his beasts and it was better to have a few reasonably dependable ones selected from the freshest of his force rather than a numerous body which would lack stamina and mobility, for it was a clear case of the survival of the fittest. Within a few hours after the hasty orders from Lord Roberts had arrived at French's Headquarters, Broadwood's Brigade with the Carabiniers, selected because of their having had at least a more extended period of comparative rest than the others, started without further ado for Koodoosrand. One squadron of the Carabiniers was detached to carry out a reconnaissance. The remainder of the cavalry division was to follow as soon as General Methuen and his infantry, who had followed French northward, should have reached and garrisoned Kimberley.

Before the cocks began to crow on the neighboring Boer farms the horses of the chosen British cavalry brigade which were to carry a total of about one thousand of all ranks were saddled and bridled and took the road by Susanna and Boshvarkfontein, towards Kameelfontein. General French and his staff accompanied them. They moved on without delay directing their course by the compass upon Koodoosrand Drift. If Cronje's forced march had already brought him nearer Bloemfontein than it was anticipated, it would yet be possible to strike him in the flank or delay his retirement until the arrival of the pursuing infantry.

From twenty Boers captured in some rough country known as the Koodoosrand and who proved to be signallers in Cronje's army, it was learned that the whole force of the unsuspecting Cronje with the wagon train three miles long, (without which he would probably already have been in Bloemfontein), were creeping slowly eastward along the north bank of the Modder. It was quite natural that Cronje neither anticipated nor prepared for the sudden retrograde march of the British cavalry. He regarded Lord Kitchener as his only danger, never dreaming that General French would even hear of his flight, until it was too late. He thought that the British cavalry, which had relieved Kimberley, was then operating north, and believed its intention to be to intercept him in that direction. For this reason Cronje had refrained purposely from moving round the west and north of Kimberley and had deliverately chosen the more daring course of marching directly east between the British columns.

At the very moment when Cronje felt confident that French was engaged in a fruitless campaign to the north of Kimberley, the latter was making his way, as best he could, in his depleted state, on a diagonal line for Koodoosrand, the only Drift now open to the fleeing Boers. It was a question of who would get there first! Thirty-five miles intervened between Kimberley and Koodoosrand Drift. So close was the race indeed that French's troopers reached the drift at midday on Saturday just as Cronje's advance guard was already approaching the kopjes of the Koodoosrand Ridge which commanded it. Like a thunderbolt from a clear sky, French descended upon his adversary just as he was preparing to make the coveted crossing, while with English tenacity his game troopers, still full of fight at the end of their weary march, threw themselves in front of the astonished Boers and seized the position before their very wistful eyes. The last of the Drifts was unexpectedly closed! Cronje's last hope of reaching Bloemfontein hung in the balance!

Would General French, however, be able to hold his adversary for the many hours which were sure to elapse before he could expect the infantry reinforcements from Kitchener? The position of the infantry was only vaguely known to him. His situation was a critical one. It was estimated that Cronje had at his disposal at least 6000 men and several field guns, while French at most could not count more than twelve hundred mounted men and two batteries of field artillery, having left most of his cavalry at Kimberley.

With characteristic rapidity of decision and resolute audacity, typical of the true cavalry leader, General French made bold to attack Cronje before, due to the shock of surprise, the Boers could estimate the weakness of their sudden opponents. A stretch of some ten miles of open flat country extended from Kameelfontein Ridge to the river at Paardeberg, bounded on the north by a semi-circular range of hills connecting Paardeberg and Koodoosrand Drift. About six miles from the central height of this semi-circle and near the bank of the river some small white objects were descried, the head of the Boer convoy. Meantime the small force of British cavalry had moved straight and unhesitatingly forward towards the disputed drift. General French at once sent Broadwood's Brigade with their guns south and detached two squadrons to cover his front and flanks. Owing to the slope of the land, the advanced parties were unable to see what was in front of them until they had covered the low lying country and topped the rise. This brought them to within only eighteen hundred yards of the river bank. The setting framed an intensely dramatic scene. There, directly before their startled eyes, Cronje's leading wagons were just nearing the drift! *(To be continued)*

The Military Situation of Central Europe

A German Point of View Presented by the Editor-in-Chief of the *Militär-Wochenblatt* (Military Weekly)

By Lieutenant General Constantin von Altrock, German Army[1]

FOR more than two thousand years Central Europe has been inhabited mainly by Germans. The German nation, in the heart of Europe, can take advantage of its central location to obtain spiritual and material benefits for it is in a favorable position for the exchange of ideas and materials. Long and intimate relations with peoples in all directions of the compass account for its many-sidedness, its spiritual receptivity, and its speculative as well as productive power. Germany's central location favored international trade, so that during the political upswing she reached great prosperity.

But as Germany never had natural frontiers—and today less so than ever—her insecure central position exposed her to all the convulsions which have shaken Europe during the past two thousand years. Nations with fortunate and secure borders do not at once appreciate the delicacy of such a situation, especially such a country as the United States, which lies between two oceans and cannot be seriously attacked from either sea or from the north or from the south.

As a result of this precarious situation, important parts of the German peoples and of German lands were separated from Germany during the course of centuries. Germany's border today is a torn and separated line of an extremely strange appearance, hardly duplicated by that of any other country. Fragments torn from Germany in the course of history are found today as German minorities in every adjoining country (see Sketch No. 1).

We recall that more than two thousand years ago the Romans made incursions from the south, west, and north, the effects of which were lasting. At the beginning of the Christian era, Rome decided to advance her frontier from the Rhine to the Elbe. But in the year 9 A. D. the most important military leader and statesman of old Germany, Hermann of the Cherusci, Arminius (Armin), annihilated the legions of Varus in the Teutoburg forest, and fiercely and successfully held off the unprecedentedly large armies under the Roman leader Germanicus. This Roman warrior had invaded Germany from the mouths of the rivers of the North Sea, but he was forced back so that the Roman frontier remained at the Rhine.

In the tenth century we see the Hungarian rider peoples under the Hun king, Attila, overrun German districts (*Gauen*) in all directions, leaving behind him a train of ruin and murder. In the final drama of the battle on the Catalaunian fields we note German clans on the side of the Huns, as we also saw them with the Romans.

In the thirteenth century the Mongols from the east reached Silesia where, though victorious, they left the field to the heroic "Dying Franconian Knights."

In the sixteenth and seventeenth centuries the Osmans, the Turks, came from Asia and repeatedly appeared before Vienna, which was barely saved.

In the seventeenth century the Thirty Years War brought a mixture of peoples to Germany. Frenchmen, Swedes, and others came and devastated the German land so thoroughly that many regions had to be rebuilt and repopulated after the war. The armies of Louis XIV of France in his predatory wars mercilessly ravaged the German western districts, cities and country, for which King Louis received the title "Le Grand."

Even in the Napoleonic era, at the beginning of the nineteenth century, Frenchmen and a conglomeration of peoples who followed the eagles of the great Corsican, crossed Germany in all directions. In 1812 the gigantic armies of Napoleon marched from the west through Germany against Russia, only to recross the poor land from east to west after the disaster on the ice fields of Russia in 1812, pursued by the Russians and their allied nations.

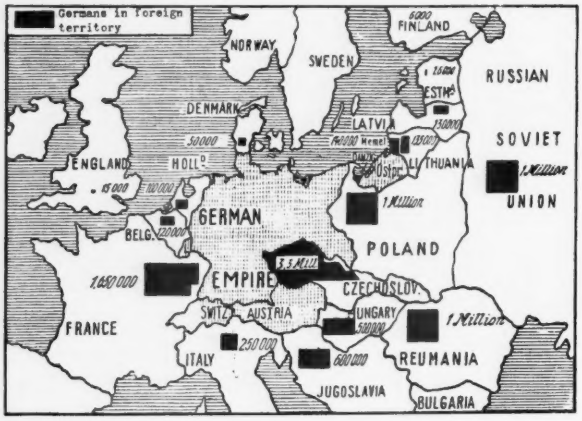
These events of two thousand years show that a state situated like Germany can live only if it is capable of defense. Since Germany has not always been in this condition, her history is an almost continuous record of suffering, relieved only by periods of development under the protection of arms.

After the terrible period of the interregnum from 1254 to 1273, the Hapsburg family secured the German

General von Altrock.

[1] Translation by Colonel G. M. Blech, Medical Reserve.

imperial crown and held it until 1806. This family could have been destined to work for Germany's salvation if it had maintained itself as German, but its outside interests and the terrible religious wars brought Germany to the verge of ruin. One can recall these historical epochs only with a shudder.



Sketch No. 1.—The German Minorities in Foreign Countries.

It remained for the Hohenzollerns, who had reigned in Brandenburg-Prussia since the beginning of the fifteenth century, through five hundred years of mighty effort, to build the new German Empire. It was an especial favor of fate that the four greatest Hohenzollerns—Frederick William, the Great Kurfuerst, King Frederick William I, Frederick the Great, and King William I, later the first German emperor—came in a succession of about 150 years, which left their impress on the empire.

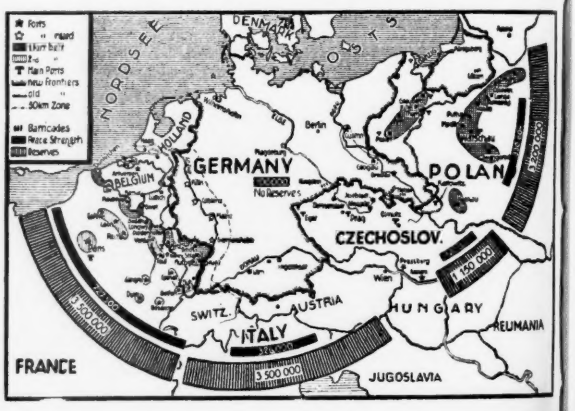
It was particularly King William I who fulfilled the age-old desire of the people for a German kaiser and thus brought to a realization the politics of his ancestors. This rare man, possessed of the experience of three generations, was a great character and one of the sages of the world. He realized that the Prusso-German state would perish if it lacked adequate defensive strength. As advisers he called Bismarck, Roon, and Moltke—world renowned names today—and risked his life and crown by forcing the resisting representatives of the people to provide for the organization of the Prussian army. The danger that threatened Prussia is proven by the wars of 1864, 1866, and 1870-71. These were concluded successfully. The foresight of King William I led the Empire securely through all perils from without. The unerring political sense of the epoch of William I was lost with his successors. Germany remained numerically behind her neighbors. In the World War, having often to fight at a ratio of one to ten, she long held her own with honor against twenty-five nations whose enormous superiority in man power and materiel finally crushed her. The treaty of Versailles forced the German people into helplessness. Only a torso was left of the old German empire.

The effects of that treaty being generally known, there is need here only for a brief sketch. The German borders were rent and Germany was transformed into a country without a defensible frontier. Surrounded by nations with compulsory universal military service, Germany has only 100,000 soldiers enlisted on a pay basis for a long period. All European nations except Germany, Austria, Hungary, and Bulgaria, are much better armed than they were before 1914. They can at any time mobilize 10,000,000 trained men exclusive of reserves, against Germany's 100,000, as they lie around Germany in readiness.

Sketch No. 2 shows that in all probability it will be German territory over which the future European wars will be waged. God help a country in such a situation! Even the best prepared country is weak in a struggle of one against a hundred, and especially when all opponents command the modern armament and equipment that is barred to Germany. In addition, France is protected by a double belt of forts, part of which have modern subterranean installations (see Sketch No. 2), while the German demilitarized region of the Rhine is open and exposed to attack.

France, Belgium, Italy, Poland, and Czechoslovakia, even small Lithuania, have built effective nets of roads for a strategical concentration against Germany. The German frontier railroads, on the other hand, have been destroyed.

The German army lacks light and heavy artillery,



Sketch No. 2.—Defenseless Germany.

tanks, flyers, military aviation equipment and preparation, machine guns and ammunition, modern motorization, submarines, and an adequate fleet. Germany has none of her colonies to this day.

The danger from long range hostile fire from the open German frontiers is so great that only four of the larger inland cities can be safe from it. Every other part of German territory is theoretically in the zone of hostile long range fire (see Sketch No. 3).

Germany's critical danger on account of her helplessness in air defense cannot be emphasized enough. The latest day bombers can cover over 300 kilometers in an hour. Berlin is only 175 kilometers from the Polish frontier, 185 kilometers from the Czechoslovakian border, and 300 kilometers from the sea. The capital of Germany is absolutely open to air attack.

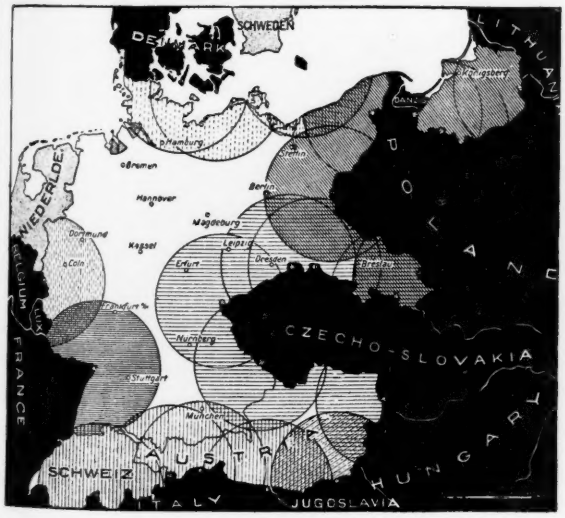
There is not a single locality in Germany that cannot be seriously menaced by air (see Sketch No. 4).

After the war Germany was forced to abandon railroad improvement and construction that had been planned west of the Rhine, such as four-tracking of the Cologne-Dueren and Coblenz-Trier lines, and double tracking of the Juenkerath-Losheimergraben, Gerolstein-Lommersweiler, and Bad Muenster am Stein-Odernheim lines. At the same time her neighboring nations improved their railroad nets by a great deal of new construction which has great military importance, calculated especially to improve the conditions for concentration against Germany.

In Belgium the four-track Luttre-Charleroi-Namur line and the local Liége-Chenée line increase the railroad capacity of Liége, which had been very limited. Better connection between the Belgian and German nets was secured by the development of the double track Herbesthal-Raeren and Gouvy-Trois Ponts lines, while the newly constructed Houthaelen-Liége line improved the connection between the north Belgian railroads with the lines towards Germany.

France carried out new railroad construction along her eastern frontier that is no less important from a military point of view. In this belong the four-tracking of the Lunéville-Sarrebourg line, the two-tracking of the Verdun-Metz and Nancy-Bensdorf lines, and the construction of the Lérouville-Novéaut-Metz line, which improve the connection between the railroads of Lorraine and the older French roads.

Improvement of the connection with Alsace via Mulhouse-Belfort is secured by the construction of the cuts through the Vosges: St. Dié-Saales-Strassburg;



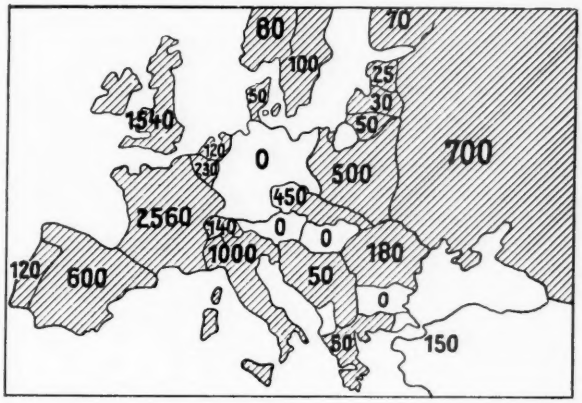
Sketch No. 3

The shaded circles denote the radii of hostile distance fire from the frontiers of Germany's neighbors. This sketch shows better than lengthy descriptions that Germany is "a country without frontiers."

St. Dié-Markirch-Schlettstadt; Epinal-Cornimont-Metzeral-Colmar; and Epinal-St. Maurice-Wesserling-Mulhouse. This construction will facilitate a French concentration on a wide front against the upper Rhine.

Italy's extensive two-tracking of the line from Verona via Bozen in the direction of Innsbruck gives her an essential increase of military protection of the new frontier territory of South Tyrol.

Czechoslovakia's construction of an effective road of communication towards Germany, improved trans-



Sketch No. 4

The numbers show the thousands of manned military aeroplanes which encircle the former Central Powers of Europe.

portation facilities from Carpatho-Russia by the development of the Prague-Pilsen line and the lines of the valley of the Elbe, Prague-Bodenbach and Vstaty-Leitmeritz-Teschen.

Poland has invested vast sums to establish a new north-south connection by building the Kattowitz-Hohensalza-Bromberg-Gdingen line. This is of great importance for her defense. In addition a new road of concentration against Germany was obtained through the construction of a track from Warsaw to Stralkowo, connecting with the existing line to Posen.

Even Lithuania has improved her railroad net by enlarging the line from Dunaburg via Abeli-Schaulen (Shavli) to Tilsit and by constructing the Schaulen-Telschi-Memel line, all of which provide her with greater facilities for transport towards the German frontier.

If one surveys the railroad construction of the above named states since the end of the war, the general view shows that all have much military significance, especially in the improvement of the conditions that would affect a concentration against Germany. These countries have applied a lesson of the World War, that the successful conduct of military operations is possible only with the aid of effective railroads, and they have spared no expense to obtain such facilities on a large scale. On the other hand Germany, through the dictate of Versailles, as well as through financial emergency, is not able to alter her railroad net to meet the new conditions, nor even to satisfy the most pressing demands of national defense.

What the dictate of Versailles and the other treaties have done to Germany, Austria, Hungary, and Bulgaria, has been done to a people but once before in the history of the world when Carthage was disarmed before the third Punic War then—Carthage was destroyed!

North of Sixty-Three

By Frances Stuart Kobbé

GOLD! GOLD!! GOLD!!! When the last boat from Alaska's icebound harbors steamed into San Francisco in the Autumn of 1897, she carried among her passengers sixty worn but triumphant prospectors. To an astonished populace they displayed their little buckskin bags with the irrefutable evidence, the precious, yellow "dust." Immediately a wave of wild excitement, of gold hysteria travelled eastward over the telegraph wires overwhelming the entire nation. "Alaska" was the word on everyone's lips. "Uncle Sam's Icebox" at last had come into its own.

On May 28, 1867, the Senate confirmed the treaty to purchase Alaska from Russia for the sum of $7,200,000. In spite of the vast extent of the acquisition which is a third greater in area than all the Atlantic states from Maine to Florida, this seemed to the layman a large price to pay for a country whose mineral wealth was only suspected, and whose chief value seemed to be that since it was situated only 150 miles from the Siberian mainland, it could be used in case of war in the Pacific. For thirty years its possibilities lay dormant. From the first, the Army was supposed to be responsible for Alaskan affairs, but without legal standing or the necessary power. In 1884 a shadow of government was granted by Congress when the laws of Oregon were extended to the largest territory of the United States. Regulations were made regarding the seal fisheries, the importation of firearms and the exclusion of intoxicating liquors. Customs, commerce and navigation laws were drawn up. Some judges were appointed, and a marshal and some commissioners, but the territory was so vast and so sparsely settled, and communication was so difficult that the only law in the country was still represented by the small military force maintained there.

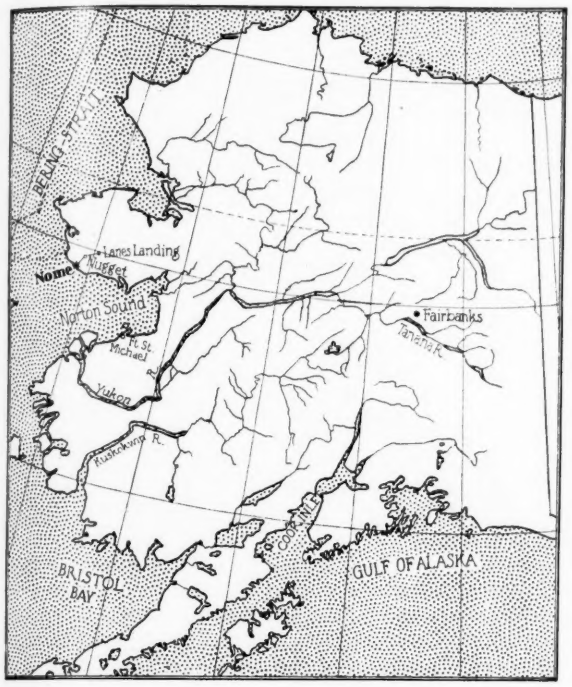
With the discovery of gold, 18,000 people rushed to Alaska. They came from all walks of life. Beside the adventurers, there were sober, hard-working citizens who gave up dependable jobs to invest all their savings in the quest for quick riches. There was also the inevitable riff-raff, drawn by the direct communication with the West Coast ports and the freedom from the restraint of law and order. Canada took quick action to protect its section of the goldfields by installing four hundred Northwestern "Mounties." Undesirable characters were forced without ceremony over the border into United States territory. This made a desperate situation of lawlessness, and representations were made to Washington to protect adequately our citizens and property by military control of the Yukon district.

In September, 1897, the Secretary of War telegraphed an order for Lieutenant Colonel Randall with two other officers and 25 men of the 8th Infantry to proceed at once to St. Michael for the purpose of preserving order and protecting property. Here Fort St. Michael was established by a War Department order authorizing "the use and occupation of all contiguous lands and waters within 100 miles of the flagstaff of Fort St. Michael on the island of St. Michael, Alaska." It stated further that the soldiers would be responsible "in the absence of other provisions of law and of all local civil officials within the limits of the country surrounding the island of St. Michael and the mouth of the Yukon River, for the security of life and property, the preservation of order and the protection of property and business interests."

It was a barren, wind-swept land in which Colonel Randall and his men found themselves. The island was bleak and treeless with grim outcroppings of rock, facing an equally bleak and treeless mainland. What vegetation there was, was brown and dead-looking. A foot under the surface of the ground, there was ice the year around. The climate was not as severe as might have been expected within the Arctic Circle, but sudden violent storms were frequent. During February, the worst month, the thermometer hovered between 25 and 50 degrees below zero. It was a dry cold however, so deceptive that it was necessary to issue an order forbidding the soldiers to go out of the barracks without full winter clothing lest they should be overcome by numbness before they realized their danger. The glare on the snow, causing snow-blindness, was one of the difficulties to be contended with. The soldiers wore dark glasses in the winter and even a special kind of eye-protector made by the Eskimos which consisted of rounds of thin wood with a narrow slit for vision. They adopted the kind of boots which the Eskimos made, fashioned of reindeer skin with soles of walrus hide. In the winter they travelled with dog-sledges. The sledges were made of wood and skins, without any metal, the parts being bound together by rawhide thongs. The last boat went out of the frozen harbor early in October and there was no further communication with the States by water until the ice went out in one big sheet around the middle of June. Except for the cold, travelling was easier in winter than in summer. The summers were rainy, and after the first of May, the tundra was converted into a huge, semi-frozen swamp which made travel by land impossible.

Colonel Randall found conditions pretty bad. Along the Yukon the old miners and pioneers had been accustomed to settling difficulties by so-called "miners' meetings" which were more or less mob gatherings.

They viewed the advent of the military with suspicion and disfavor. This attitude was deliberately encouraged by the lawless element who had drifted in since the gold strike. Then, too, the rush of miners



Alaska.

to the interior had rendered the food supply inadequate, and starvation faced hundreds of men stranded along the Yukon by the freezing of the river. Large numbers of passengers en route for the upper Yukon were caught at St. Michael due to the loss of some river steamers that were being sent from Pacific ports. Many had no money and no way of leaving St. Michael for the "outside," as going back to the States was called. Prices were exorbitant. Gold seekers in Alaska needed a substantial stake to start on. Lumber for houses was $200.00 a thousand, and other material and labor was in proportion. Room and board in any sort of tent or shack was five dollars a day. Meals at restaurants were a dollar for the plainest sort of fare.

Back in San Francisco, Battery A of the 3d Artillery received orders in August, 1898, to proceed within a week's time to St. Michael, fully equipped for a year on Arctic service. This would seem to be quite a large order for any commanding officer, but in this case, it fell upon Lieutenant George H. McManus who commanded the battery and who had been in the Army about three years, and his second-in-command, Lieutenant Oliver L. Spaulding, Jr., just commissioned, who had reported for duty three weeks before the order came. Well aware that it was "theirs not to question why," these two young men set about the task of outfitting 200 men for a year in the Arctic with all necessary supplies and clothing, and in addition, 100 tons of extra food for issue to destitute gold-seekers. They embarked at the appointed time on the "Humboldt," a small coasting steamer, for the ten-day trip to St. Michael, almost 3000 miles north. They were terribly overcrowded and most of them were seasick, but eventually the foggy trip was over and they arrived to reinforce the 8th Infantry detachment which was then under the command of Captain Wilds P. Richardson and Lieutenants E. S. Walker and Edwin Bell. The troops were at once distributed the whole length of the Yukon, Lieutenants Walker and Spaulding with seventy men taking station at St. Michael.

About this time, H. O. Hultburg, a prospector, was blown ashore in his skiff in one of the sudden storms. He landed at Cape Nome at the mouth of the Snake River. There, in the creek-bed, he discovered distinct "color." For some reason however, he did not stay and the first claim in this district was recorded in September of that year. A few weeks later some prospectors brought the news to St. Michael of the opening of the new district at Cape Nome. They were hurrying with dog-teams to reach the harbors of southeastern Alaska which the warm waters of the Japanese Current kept open, so that they could place their orders for supplies which would be shipped up from the States on the first boats to come in the following summer.

All winter long men were coming through St. Michael, some with dog teams, some carrying their own equipment, but all bound for the new district at Cape Nome. Reports began to come in of lawlessness and claim-jumping from the Golovine Bay section. The soldiers at St. Michael had found out already that the greatest difficulty with which they had to contend, was the legality of titles to property. The United States mining laws in Alaska were too loose and liberal. A person was permitted to locate and hold as many tracts of ground as he desired, each not exceeding twenty acres in area, provided: (1) that there be a bona-fide discovery of gold, (2) that the ground be properly staked or marked out, (3) that at least one hundred dollars worth of work be done annually on each claim. It was always a fine

Nome from Lane's Derrick, Snake River.

point as to just how much authority the military should assume for they could not settle titles, but were supposed to supervise the setting of stakes and preserve order.

Lieutenant Spaulding was ordered to the Golovine Bay district with four or five men "to use his good

offices to adjust matters according to law and order, and put an end to illegal claim-jumping and the destruction of locations, notices, stakes, etc." He was to endeavor to induce the miners to readjust local affairs upon a just and businesslike basis to prevent uncertainty and insecurity of land titles, which had

Commanding General and Staff, Dept. of Alaska, Ft. St. Michael, Jan. 17, 1901.

hitherto retarded the development of that country and caused loss and suffering. He was to relieve the necessities of the destitute in the district, and arrest criminals and bring them to St. Michael. Since it was impossible to give full details of instruction to meet all emergencies, Lieutenant Spaulding was ordered to use his own judgment and take such action as he deemed necessary for the cases that came under his observation.

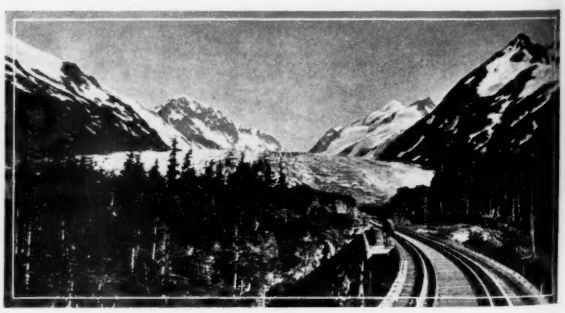
Undismayed by the scope of his orders, Lieutenant Spaulding set out in February, the worst month of the year, with a reindeer caravan and five men, for a district already conspicuous for its lawlessness. The reindeer were in bad condition and some of them had never been broken to harness. It was not only difficult to drive them, but dangerous to harness them, for they struck out savagely with their sharp forefeet whenever the soldiers approached them. The journey was made around the shore under these adverse conditions and the lieutenant thought he was fortunate when he could make 30 miles a day, taking 15 hours to do it. On the way he was passed by a speedier dog-team which took the news of his impending arrival ahead of him to Golovine Bay. When he arrived, he found a case already awaiting his decision.

Two men had deliberately jumped a claim. Knowing that this was really a case for civil authority, they brazenly waited to see what the young lieutenant would do about it. They soon found out, for he promptly placed them under arrest. There was no jail at Golovine Bay, and in the winter it was impossible to send the prisoners to Sitka for trial before the proper civil authorities. A trader gave the young officer the use of a log hut as a guardhouse until they could start back to St. Michael. Finally the caravan set out on the return trip, Lieutenant Spaulding and the soldiers with their reindeer and sledges taking the lead. The prisoners were furnished with a reindeer and a sledge but no supplies. Their orders were to follow. After the first day they needed little guarding, for they were too wise to attempt to escape into the dreary winter wilderness. When the march was completed, the prisoners were held at St. Michael until summer. The case was dropped but they made no effort to make good on their claim-jumping.

All during the winter a camp had been growing up at Anvil City, at the mouth of the Snake River and at the foot of Anvil Mountain, so named because of its peculiar shape. There was no government there at all except a recorder of the mining district, who had been installed as soon as the strike was made in that vicinity. Before summer 2000 claims had been recorded and the area was found to be as rich as the Klondike. Colors were found everywhere. In the creeks they ran from one hundred colors to twelve dollars a pan. Gold was being taken out at the rate of from twelve dollars to two hundred and fifty a day per man, with rockers. It seemed fertile ground for all sorts of disorder, so Captain Walker ordered Lieutenant Spaulding to go to Anvil City, with about a dozen men, to take charge of the situation as he had at Golovine Bay.

As soon as the ice permitted, the lieutenant and his detail set out in a little sternwheel riverboat to cross Norton Sound. It took them twenty-four hours to reach their destination. As they drew near the open beach at Nome Harbor, they could see the tents huddled along the shoreline with the brown, level tundra behind, stretching away to the barren hills. Although the calendar testified that it was summer, not a vestige of green was to be seen, not a tree nor a blade of green grass.

At the beach were scenes of confusion. The population was increasing at the rate of two hundred and fifty a week, with three thousand already encamped there in the district. The ships, coming in, were unable to come near the shore because of the shallowness of the water, so flat-bottomed lighters met the steamers. These would come in still closer and finally the passengers would have to wade ashore carrying their belongings on their shoulders, for at that time



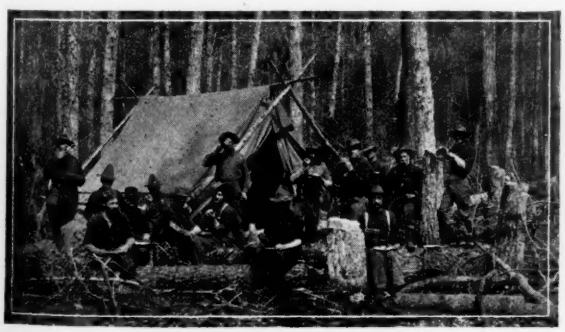
Bartlett Glacier on the Alaskan Railway.

there was not a horse or wagon in the district. There was no provision for guarding the outfits until the owners could get settled, so most of the gold-seekers joined forces with other newcomers, and took turns standing guard over their possessions.

Lieutenant Spaulding's first order was to forbid the

carrying of firearms, and his men were told to confiscate any that were displayed, giving their owners receipts by which they might redeem them when they could show a return ticket for the "outside." He also ordered all saloons to close except those that could show a license from the United States Commissioner. Anvil City was a community of adults, with several thousand men encamped in the town and immediate vicinity. This number was increasing almost daily. Most of the adventurers were men but a few had brought their wives, and there was a sprinkling of dance-hall girls. The main thoroughfare consisted of a long, muddy street, flanked on both sides by shacks, with canvas roofs and sides, that were used for saloons, gambling houses, restaurants and lawyers' offices. Although there was a law against the sale of liquor in Alaska, it had never been enforced, and the first ships to come in carried large cargoes of whiskey. Being midsummer, there were twenty-four hours of daylight, the sun hanging like a red plate in the midnight sky, but Lieutenant Spaulding issued an order that the saloons and gambling houses must close at night, and he set hours for opening and closing. If he expected trouble from this edict, he was pleasantly disappointed for the saloon keepers and gambling-house proprietors obeyed without question, and aided in the preservation of order as much as they could.

As the thousands of gold-seekers poured in, many of the newcomers were unable to find any unstaked claims to locate: This caused discontent which afforded the shyster lawyers who hovered like buzzards over the rush, an opportunity to foment trouble. They advised the disappointed ones to challenge the legality of the mining district's organization, which, it will be remembered, had been hastily installed at the beginning of the strike. Around the Fourth of July, the trouble seemed liable to come to a head. The soldiers were ready to act, but the holiday passed with only a



Infantry Right of Way Party Mess.
Valdez-Gulkana Telegraph Line, 1908.

harmless celebration. Rumors came to Lieutenant Spaulding however, that, on the tenth of July, a meeting was to be held at the Northern Saloon which would declare all previous claims void, and then reorganize and restake everything.

When this intended move was reported to Lieutenant Spaulding, he realized that some instant decision on his part must be made. His detachment was short of men, as some were out settling a disturbance on a distant claim. He took the men he had left, a corporal and five soldiers, and, at the appointed time, he went to the hall. It was a little early and the hall was not filled. He placed his men in the rear of the hall farthest from the door, the only exit. The huge, smoky room was soon filled to overflowing with five

Scene at Cordova Sound.

or six hundred roughly dressed, milling figures. At last the meeting was called to order. A resolution was passed declaring the mining district's organization void. Suddenly above the crowd, Lieutenant Spaulding's uniformed shoulders were seen, as he climbed on a bench. In a clear voice of command, he announced to the crowd that the resolution must be withdrawn. He said he did not wish to break up their meeting, and that after the withdrawal of the resolution, they could go on with any further business, but that if this order was not obeyed immediately, he would give them five minutes in which to clear the hall. The uproar was terrific. Threats of violence flew back and forth, but a few of the more law-abiding element began to drift toward the door. At the end of the allotted time, Lieutenant Spaulding ordered his men to advance in a line with fixed bayonets, pushing the recalcitrant miners ahead of them out of the hall. The milling crowd loitered around the door outside, but the soldiers, refusing to argue, broke up the knots of men. Within an hour or two the revolt was at an end. The bonfires were never lit which had been prepared to signal the waiting conspirators in the hills that the resolution had been passed, and that the time had come to jump in and relocate all claims in defiance of law and order.

The camp at Anvil City became permanent and grew into the city of Nome. Nome was "summer diggings." Bed rock was very shallow and there was a saying that gold began in the grass roots. One of Lieutenant Spaulding's soldiers, when he first arrived, was sitting idly on the beach one day, panning sand in a wash-basin. Suddenly in the bottom of his pan, he found "color." Lieutenant Spaulding, calling upon an old law that land within fifty feet of high-water mark belonged to the Government, declared that the beach was free to all, and allowed no claims to be staked there. The gold on the beach never became "pay dirt" however, although it sometimes ran as

high as seventy cents a pan. All around Nome it was unnecessary to work the dirt more than once owing to the shallowness of bed rock. Mining went on only during the two summer months of July and August in contrast to the "winter diggings" in the Klondike where the miners worked the year around, thawing and excavating during the winter and washing the "dump" during the summer.

During the summer Lieutenant Wallace Craigie and a detachment of the Seventh Infantry from San Francisco arrived to relieve Lieutenant Spaulding. Before Lieutenant Spaulding left the new officer in charge, they held conferences in his tent and Lieutenant Spaulding passed on to the newcomer the results of his year of experience in the North and much valuable information about the community in general, and all notorious characters in particular. By this time Lieutenant Spaulding felt like an old-timer, a full fledged "sour dough," and all that had gone into making him this, must have given him a keen appreciation of that part of his commission which reads: "He is therefore carefully and diligently to discharge the duty of second lieutenant by doing and performing *all manner of things* thereunto pertaining."

On September 1, 1900, the military forces at Nome, Rampart, Fort Yukon, and Circle City turned over the control of their districts to the newly organized civil authorities. This met with a protest from many citizens who signed petitions asking for the soldiers' retention, since they knew that the military jurisdiction was honest and impartial, but the time had come for the civil authorities to take charge. So ended the successful experiment of remote control from Washington extended north of Sixty-Three.

A New Infantry Drill

"AMONG the oldest, the most valued, of our tools is close order drill. Dating back to the time of Frederick the Great, when troops actually wheeled and marched with precision on the field of battle, this system was once the direct connecting link between the drill ground and the battlefield. High powered firearms soon prohibited these mass evolutions in war; infantrymen were forced to disperse and fight more as individuals than as massed groups. Yet the basic drill remained only slightly changed, chiefly because of its disciplinary value and the spectacular parades and reviews it made possible."

Thus does Captain J. Lawton Collins, Infantry, preface an article entitled "A New Infantry Drill" in the *Infantry Journal*, July-August, 1931. The writer originally suggested the system and worked out most of the details. The drill, which has been undergoing a six months' test at Fort Benning, Georgia, is of extreme simplicity and adaptability to the exigencies of active service. A brief description follows:

The squad lines up in single rank with arm's length intervals (28 inches) between men and is marched to the right by the command: 1. Right; 2. FACE; 3. Forward; 4. MARCH. To all intents and purposes, squad drill begins and ends right there.

The section forms in three ranks, one squad in line in each rank, with forty inches between squads. Faced to the right, the section is in column of threes and so marches.

The platoon forms with sections abreast, three paces interval between sections. At drill and on the road the platoon usually moves in column of threes; at ceremonies it marches in mass formation, which is a column of sixes with close interval (4 inches) between squads.

In the mass formation of the company used for reviews and parades, the eighteen squads of the company, each in single file, are abreast of each other with four inches interval between men. All non-commissioned officers, except seconds-in-command of sections, are at the head of the company in order to add to their prestige and sense of responsibility.

One of the main purposes in developing a new system of close order was to link it more closely with extended order. Thus, to change the squad from its close order drill formation to its usual approach march formation, the corporal commands or signals: Squad Column. The leader moves in the desired direction, the men simply increasing their distance in file. In deploying as skirmishers, the first four men behind the corporal move to his right, the last three men to his left. The men deploy in an irregular wedge, instead of the old skirmish line.

"One of the many advantages of the column of threes is that it offers the fastest method of deployment in case of aircraft attack. The right squad moves off the road to the right, the men in mid column going the farthest, so that the squad forms a rough semicircle. The squad on the left moves to the left of the road in a similar manner. The men of the center squad take the ditches on either side of the road."

The Development of War Department Organization and Plans for Industrial Mobilization[1]

By First Lieut. H. S. Bishop, Jr., Corps of Engineers

THE importance of supply to the success of a military operation has long been established and realized. Until recently, however, little attention has been paid to the question of the source of supply or of the effects of a great war on the industrial and commercial life of a nation. It took the World War, with its unprecedented demands, kaleidoscopic changes and far-reaching effects, to focus attention upon these matters. Our experiences therein led us to attempt, by organization and plans, to overcome in future conflicts our difficulties in the past. We seek by legislation and the adoption of sound business principles to better the administration of the army in peace, in planning for war, and in coordinating the needs of our armed forces with those of our civilian population in war.

Under Section 5*a* of the National Defense Act, as amended by the Act of June 4, 1920, the Assistant Secretary of War is charged with the supervision of the procurement of military supplies and with the "assurance of adequate provision for the mobilization of materiel and industrial organizations essential to war time needs." To this end, "the chiefs of branches (services) of the army charged with procurement of supplies," report directly to the Assistant Secretary in all matters pertaining to procurement. A better understanding of the importance of this act, and what it is intended to accomplish, may be obtained from a review of the steps that have led to the present situation.

The creation on August 7, 1789, of the War Department as an executive department gave us a civilian-controlled agency to administer the military affairs of the nation, administrative, technical, and supply bureaus, militarily controlled, were organized as occasion for their use arose. By virtue of orders of the President, there likewise came into being the office of the Commanding General of the Army. With no particular statutory duties, this officer gradually assumed control over disciplinary and military affairs of the Army. Through the process of absorption, but without specific legislative sanction, the Secretary of War became charged with direct control of the supply bureaus, as to purchases and fiscal affairs. This apparently unintended situation gave rise to frequent conflicts, due to the lack of a proper line of demarcation between the duties of each and to friction between strong personalities. With the exception of the bureau chiefs, there was no general staff or supervising agency to make plans, coordinate activities, or give advice.

The system of procurement by five separate and distinct supply branches (Quartermaster, Engineers, Ordnance, Commissary, and Medical) loosely coordinated by The Adjutant General's Department, became firmly established. Our early wars profited us little in improvement of the system. In the Mexican War, the current attitude toward the problem was reflected in the instructions by the Congress to Generals Scott and Taylor to "make the war pay for itself." This was accomplished in part by the use of local resources. The service of supply of the armies in the field in the Civil War furnishes examples of successful supply which have been studied by the world. Procurement, however, was by the separate branches; the action of these branches was not coordinated; the situation was further complicated because the several States themselves made purchases, and independent action on purchases was authorized and exercised by some of the eight territorial department commanders. The lack of a general staff or other super-control agency, and of plans for the organization of the country's resources as well as for the use of rail and water transportation, so crippled the North that it took two or three years to secure independence of foreign sources of supply.

Despite the opportunities afforded to profit by the experiences of the Civil War, no marked improvement in the supply and procurement system was noticeable in the post-war period. As far as the Army was concerned, this period has been characterized by some writers as one of "dry rot." During this time, the Signal Corps was added as another supply bureau, and the office of the Assistant Secretary of War came into permanent being (1890). This office had been created in 1861, only to be abolished in 1866. None of the present duties attached to the office and the Assistant Secretary performed only such duties as the Secretary of War directed. Another development during this period, with an important bearing on later events, was the gradual ascendancy of the Adjutant General of the Army over the other bureaus.

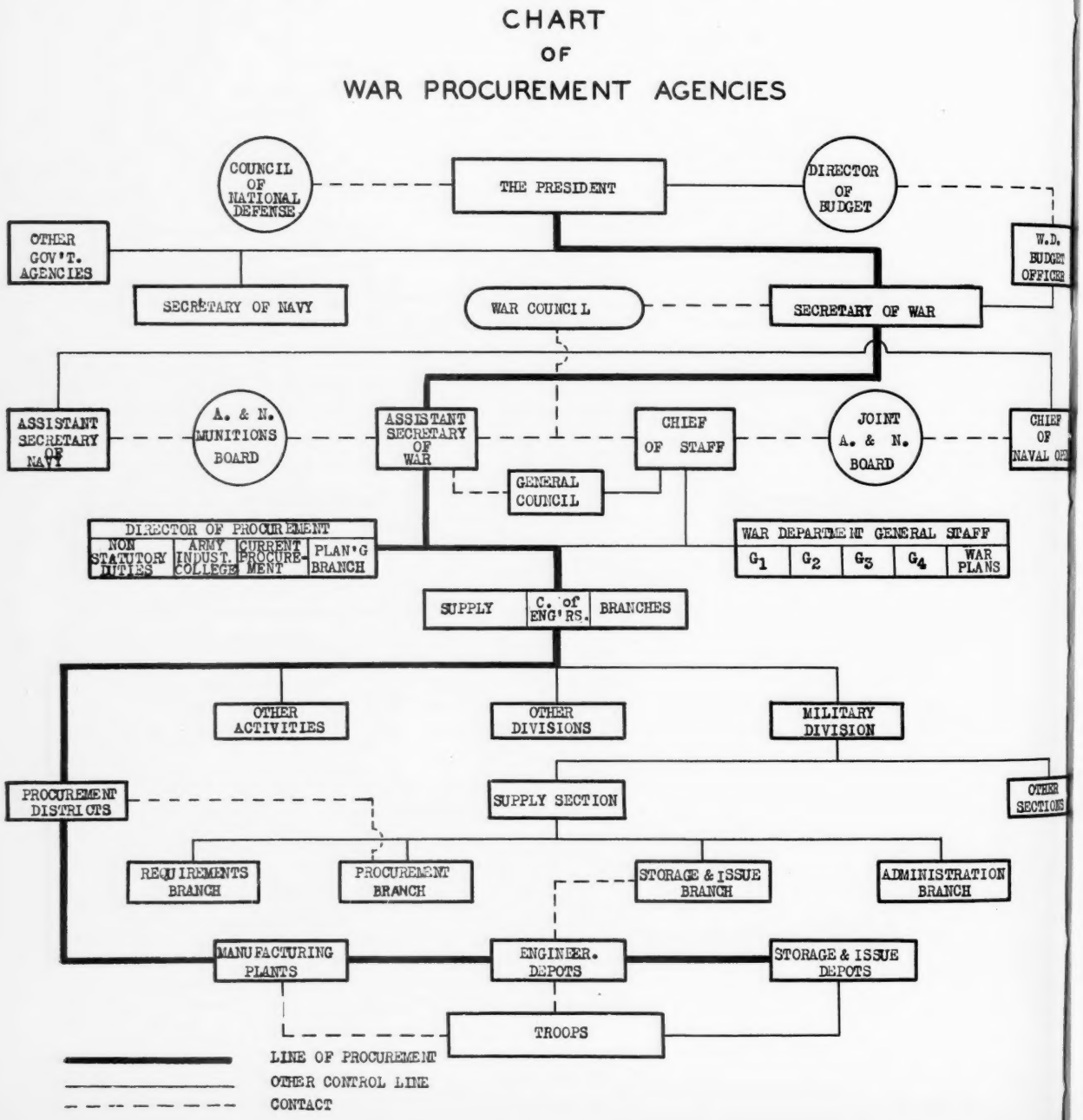
Precipitated into the Spanish-American War without plans or foresight, the supply bureaus, well entrenched and operating satisfactorily for the supply of an army of 25,000, entered the field of procurement in competition with each other. The resulting inefficiency and great waste are only too well known to students of military history. Such organization as we had, uncontrolled and uncoordinated, broke down under pressure.

The new century, however, brought some ray of hope. Through the foresight of Mr. Elihu Root, then Secretary of War, a General Staff Corps was created

[1] The general aspects of Industrial Mobilization are discussed in General Moseley's articles that appeared in the Infantry Journals for January, February, March, April, May and June, 1931. This discussion is based on the solution of a problem studied in the 1930-31 course, at the Army Industrial College.

by the Act of February 14, 1903. The office of the Commanding General of the Army was replaced by that of the Chief of Staff, who was charged under direction of the Secretary of War, with supervision over all troops, staff departments, and supply bureaus. The General Staff Corps, headed by the Chief of Staff, was to combine the duties of making plans for the national defense and the mobilization of the military forces in time of war, with those of furnishing professional advice to the Secretary of War and superior commanders, whose agent it became for informing and coordinating the action of all under their control. No specific reference, as yet, was made to the mobilization of industry or the material resources of the country. Thus, in part, the existing evils in administrative functions were rectified and corrected. There were still left, however, seeds of contention and sources of inefficiency.

Failure to define or limit the duties of the General Staff Corps resulted in its attempt to assume authority in the actual administration of the separate bureaus. The latter naturally resented such interference and resisted this control. The bureaus, except for the absorption of the Commissary and Pay Departments by the Quartermaster Department in 1912 and the reduction of the influence of the Adjutant General's Department,



remained as before and continued to function independently of and in competition with each other. The army carried on with limited appropriations, and reduced numbers, there was no sound military policy with a definite scheme of organization, the General Staff Corps did not plan for or solve the supply problem.

We created a military policy in the National Defense Act of June 3, 1916, and at the same time limited the duties of the General Staff Corps to planning and giving advice. Official recognition was given to the need of coordinating the industrial with the military aspects of war, by charging the General Staff with the preparation of plans for the "mobilization of the manhood of the nation and its material resources in an emergency." Also, the President was given the power to appropriate property for government use in war in return for just compensation, and the Secretary of War was directed to make a survey of plants equipped for or capable of transformation into facilities for the manufacture of arms and ammunition.

The same year, the creation of a Council of National Defense was authorized by Congress for the purpose of the "coordination of industries and resources for the national security and welfare." It was to consist of the heads of the departments of War, Navy, Interior, Agriculture, Commerce, and Labor, and to be assisted by an advisory commission of seven leaders in industry. This latter body became the nucleus of the strong War Industries Board that eventually took over and ran the industrial side of our part in the World War.

The provisions of the National Defense Act were not realized before we were drawn into the World War and forced to expand our still inadequate bureau system in order to meet the demands of the supply problem. Competition with other bureaus and with our allies, congestion of contracts, paralyzation of transportation, high prices, and shortages of materials and labor resulted. Attempts to create order out of chaos brought on, in the winter of 1917-18, Congressional discussion centered around whether to adopt the British scheme of a ministry of munitions or to maintain but rectify the existing system. The latter procedure was adopted. The corrective measures involved the reorganization of the War Industries Board, which had meanwhile evolved from the Advisory Commission, the Munitions Standards Board, and the General Munitions Board; and the reorganization of the General Staff to include the Purchase, Storage and Traffic Division. The latter body became the central agency of the War Department to coordinate the purchasing activities of the supply bureaus. The Overman Act of May 20, 1918, which confirmed the war-time powers of the President by authorizing him "to make such redistribution of functions" as he deemed necessary, greately facilitated this reorganization. The civilian control of the War Department was further increased by the appointment on August 28, 1918, of Mr. Benedict Crowell, the Assistant Secretary of War, as Director of Munitions to supervise all procurement activities of the army except for aviation. Two other assistant secretaries were in office, one for aviation, and the other charged in part with supervision of welfare activities. The details of operation, the advantages and disadvantages of the system of procurement set up, are too numerous to be included here; the success of the system is reflected in the final outcome of the war and in the fact that it forms the basis for our present-day activities.

After the war, the steps taken to translate into legislation the lessons learned, revolved around the old conflict between the General Staff Corps and the supply bureaus. The omission from one proposed bill of the clause forbidding the interference of the General Staff in administrative details brought down a storm of protest. The General Staff maintained that no controlling or planning agency other than itself was necessary to handle procurement of supplies. Mr. Crowell proposed setting up a civilian head, trained in business, as Assistant Secretary of War, to coordinate directly the procurement work of the supply bureaus, leaving the General Staff to continue to plan and advise in military matters only. This plan met opposition on the grounds that suitable men for the position were hard to obtain, and that it would be better to leave to the Secretary of War the distribution of tasks to his assistant. Further, it was believed that giving to the Assistant Secretary such powers of control would create too powerful an official, junior to the Secretary and to the President.

The resulting legislation of June 4, 1920, in the form of an amended National Defense Act, gave us the system under which we are now working. The Assistant Secretary of War became supervisor for the procurement of supplies, and business adviser to the Secretary of War. The offices of second and third assistants were abolished. (The second has since been revived as Assistant Secretary of War for Aviation). The Chief of Staff, as military adviser, was charged with the coordination of the bureaus (services and arms) as to military matters. The General Staff Corps was restricted as before to planning and advisory functions. The War Council of December 1917, was given legal standing as an agency for settling the divergent views of the Assistant Secretary of War and the Chief of Staff as to the business and military interests of the army. The recent creation of the General Council furnishes an additional agency promoting coordination and harmony.

The respective duties of the office of the Assistant Secretary of War and of the General Staff, under provision of the new bill, were clarified and promulgated to the services in General Order Number 41, War Department, 1921, as the result of the recommendations of a board headed by General Harbord. There followed the reorganization of the General Staff, and the office of the Assistant Secretary of War as we now have them. The retention in Section 5 of the National Defense Act, either inadvertently or otherwise, of the clause giving the General Staff authority to plan for the mobilization of the "material resources" of the county, leads to the opinion that duplication of authority exists. Without a working agreement such as now is in operation this overlap would be a source of friction.

The organization for carrying out War Department

procurement plans is shown, in part, in the accompanying chart, from which it can be seen that the duties performed are divided along industrial and military lines, each with control and advisory functions. Each of the supply services reports directly to the office of the Assistant Secretary of War on procurement matters, and to the Chief of Staff in those concerning military affairs. The General Staff, through its plans and advice, assists in the furtherance of the work of the Chief of Staff, while the Planning Branch performs the same work for the office of the Assistant Secretary of War.

For war planning, the General Staff furnishes, through its General Mobilization Plan, a directive that provides policies, sequences, and procedure for the mobilization of the Army of the United States, while the office of the Assistant Secretary of War, in the Basic Plan for Procurement of Military Requirements, furnishes a plan for guidance and control in the procurement of supplies for war. The two plans together form the basis for the separate branch mobilization plans, the corps area and other plans, and for mobilizing the manpower and the material resources of the country.

The war procurement planning program, coordinated with the basic strategic and tactical plans of the General Staff, provides an assurance of reasonable freedom from the evils of unpreparedness of past wars. Progress is being made in the figuring of requirements, standardization of types and specifications, allotment of priorities, and the allocation of facilities in coordination with the Navy. Studies are being made and measures taken to secure the cooperation of industry in war, in the matter of price fixing, conservation of materials, transportation, labor and power, which minimize the possibility of competition, confusion, and inefficiency.

Conclusions

From "A New Infantry Drill" Captain J. Lawton Collins, Infantry Journal, July-August

CHANGES in army customs and methods have always met opposition from conservatives, who feel that what has proved itself in the past has continued merit for the future. These conservatives are our best guarantee against unsoundness in our progressive development. The chief question which these gentlemen will ask in conjunction with the new drill will be: What is its value in building up discipline and esprit? The advocates of the new drill answer unhesitatingly that it has equal if not greater disciplinary value than the old system. In this connection it may be well to quote Baron von Steuben, the father of our present drill, and a disciplinarian par excellence. Von Steuben, in writing about America to a friend in Prussia, in 1778, said:

"The genius of this nation is not to be compared to that of the Prussians, Austrians or French. You say to your soldier, 'Do this,' and he doeth it. But I am obliged to say, 'This is the reason why you ought to do that,' and then he doeth it."

The new drill is simple, logical, and sound. Soldiers will be quick to sense this, and will willingly give it the snap and precision which are the marks of well-disciplined troops at drill.

The objection may be raised that the column of threes will increase the road space of a division by twenty-five per cent. This is not the case. The major part of the division's column is made up of motor and animal-drawn transportation. The total increase in length for the twelve battalions of infantry in the division is less than 500 yards.

Another point, one that has actually been raised, is that the drill is so simple, will take so little time to teach, that there will be scarcely anything for regular troops to do at small garrisons. The answer to this charge is evident to any one who merely reads the list of arms with which the infantry is now equipped, or considers for an instant the complex duties of modern infantry in combat. Long periods of close-order drill never have improved the training or morale of any troops.

Frankly, this drill was designed less for the peace-time needs of the Regular Army than for the more pressing demands of a hurriedly mobilized National Army. It should be a boon to the National Guard which has so little time for training during peace or war. Troops can be made expert at this drill in a few days and can then proceed with the more important and more difficult tasks of learning to handle their weapons and to attack and defend by that combination of fire and movement which is so easy to talk about but so difficult to achieve. The new drill will quickly clear the way for this essential technical and tactical training. So it is that the writer, with confidence born of six months' practical tests and experiments, believes that this modern system of drill offers to the service another contribution of the infantry to the progress of the Army.

A Cavalry March

By Commander Holloway H. Frost, U. S. Navy

EDITOR'S NOTE: *This article is published by the courtesy of the Washington Post. It shows that the author is no stranger to the "quarterdeck" of a horse and that he has the makings of a Cavalryman himself. This is an excellent picture of a forced march and a real tribute to the Cavalry spirit.*

IT was ten minutes to four on a raw November morning. From the wide doors of the stables rectangular beams of light infiltrated a few yards into the defenses of a dense cold fog. Two widely spaced electric lights diffused a faint glow over the animated scene along the stable road. Dim shapes moved to and fro as men and horses exercised their muscles in preparation for their long journey. Iron hoofs clattered on the hard pavement. Sallies of soldierly wit or words of advice and admonition to the horses came through the darkness.

Here and there troopers led their mounts aside for a last inspection of their complicated equipment. Bits and curb chains were given their final adjustment. Once again saddle blankets were smoothed out. A gentle strain was taken on cinches. Last minute additions were made to the contents of the already closely-packed saddlebags. Rifle, sword, pistol and ammunition were adjusted in a last-minute attempt to make the carriage of their heavy weight easier to horse and man.

Gradually movement diminished. Order grew out of seeming confusion. Men and horses began to take their accustomed posts in the troop formation. The time to start was now at hand: 4 o'clock. "Tighten cinches," came the word. Then: "Stand to horse." When there was one minute to go, "Prepare to mount" passed along the platoons. And finally—at the very hour—"Mount." Here there was a dim confused upward movement, a creaking of leather, and a clatter of hoofbeats as a horse or two surged forward a few paces in his eagerness to be off. They had not long to wait, for immediately there followed the troop commander's command: "Forward Ooooo!"

Let us watch the troop as it passes in dim review before us. Ahead rides the troop commander. Then come his orderly and the stable sergeant. The latter carries, in lieu of sword, a wooden lance, below whose spearhead floats the guidon—a burgee pennant of red and white.

Close after the guidon marches the first rifle platoon. After an interval of some fifty yards there follows the machine rifle platoon. Its led horses step out briskly under their heavy loads. I wonder if they know quite what is in store for them. Last comes the second rifle platoon. At its rear ride the first sergeant and a lieutenant. Today the march will be a long one. The horses carry, in addition to their riders, about one hundred pounds of equipment. So it has been necessary to eliminate a few of the oldest horses and the most recently received remounts. In all, three officers fifty-six soldiers and about sixty-five horses today compose E Troop, 3d Cavalry.

For about fifteen minutes the troop proceeds at a walk to shake down the equipment. Then it halts and the men dismount. In the darkness there is a careful examination and readjustment of equipment. A further tightening of cinches is in order. This last item is of paramount importance. If the cinch is too loose, the saddle chafes the horse's back. The blanket gets wrinkled under the saddle and there is more chafing. A sore back is the result. On the other hand, if a cinch is too tight, it interferes with the breathing, circulation and muscular play of the horse. A correct adjustment is had when, with the back of the hand against the horse's side, all four fingers can be run inside the cinch. During this ten minute period of rest the officers move through their commands with flashlights to make an inspection of each man and animal.

Now all is set for the real work of the day: a hike of 50 miles by map—certainly 2 to 4 more if all the turns of the road are counted. The time allotted is between eleven and thirteen hours, including all halts. Allowing two hours for the midday halt, this requires a rate of about five miles per hour. And this is a real good speed to be sustained for over 50 miles.

The troop sets out into the darkness, each man leading his horse. The rate of march is about three miles. After leading for fifteen minutes there is a halt for a few seconds—just long enough to get the troop closed up and the men into the saddle. Then comes the command, accompanied by flashlight signal from the head of the column, to trot. Each platoon takes up the increased gait in turn. We are now on a hard highly-curved macadam road. The fog has made its sloping sides wet and slippery. To obtain surer footing and leave a path for passing cars our column has split into two files along the edges of the highway. Here despite the slope and uneven ground, the horses find softer and more secure footing. They trot along at a steady eight-mile pace—three feet from nose to tail. Their riders have a short and firm grip on the reins to give them instant support if they should stumble.

A quarter moon rides high in the sky. As it appears through breaks in the clouds, a dim silvery light is diffused through the fog. Ahead I can see the blurred shapes of a single horse and man. To the right across the road four or five move ghostlike—except for the pounding undertone of the hoofbeats. When iron hits stone, red hot particles of metal fly off meteorlike and lie glowing in the roadbed. To me it is a scene of intense interest, but there is little or no opportunity to

enjoy its beauty. Concentration is the watchword—unless you wish to find yourself in the gutter. Yes, everyone now to his own job—which is plenty. My splendid mare has not yet quite found her place in this troop of strange horses. She has a tendency to come out into the middle of the road, where her feet may slip on the wet sloping pavement. So a slight steady pressure of my right rein against her neck and a slight shifting of my weight off-balance to the left must hold her out in her proper track at the left edge of the road. Also, the cool night air and her own eager spirit carry her forward a bit too closely upon the heels of her comrade ahead. This must be counterbalanced by occasional very gentle touches on her curb rein, while a constant pressure on the snaffle rein give her support and confidence in her rider. Her pace must be slowed without causing loss of energy, every ounce of which must be saved as a miser hoards his pennies. In my case this was doubly essential, for my mare had been borrowed from another troop and had received no training for her long march.

After a twelve-minute trot we slow to a walk, dismount and lead, turning off into a small gravel byroad. The footing here is better. But sometimes, particularly on the all too frequent hills, rains have washed away the sand and exposed a thick layer of large stones. Fortunately the horses seem to pick their way through them unerringly in the dark. Now we again take up the trot, riding, as it were, boot to boot. Ahead are the glaring headlights of a car. Its driver, with the true spirit of the horse-loving Virginian, waits patiently as we file past.

As the first hour of the march draws to its close there is the customary eight-minute halt. As the animals graze quietly at the edge of the read, cinches are loosened and rifles lifted from their holders. With the aid of the officers' flashlights each foot is lifted in turn to see if shoes are coming loose or if stones are wedged between them and the frog. When seven minutes have passed the order comes to cinch up. We mount by platoons, walk for a hundred yards or so, and then come to the trot. From now on it will be trot and lead, except for an occasional short walk and the regular hourly halt. These last are essential in cavalry marching. The short time lost is more than counterbalanced by the energy which the horse regains. It is surprising how much a tired horse can come back in just eight minutes.

About six o'clock the first welcome evidences of dawn appeared, but the fog was not dissipated for nearly two hours longer. The road now was much better. For miles we had fine hard-packed moist sand to march over. But now a new difficulty began to make itself felt: a continuous succession of rather steep hills. These probably doubled the expenditure of energy per horse per mile. A troop or larger unit is much more affected by hilly country than a single horseman. The latter can pick the down grades and level stretches for his trots and can walk or lead up the hills. A troop, spread over several hundred yards, cannot do this. Where the country is fairly level its commander can frequently adjust his gaits to the ground. But where the hills follow in continuous succession he must virtually stick to a time schedule and take them as they come. So in the course of a twelve-minute trot we might have to climb and descend four or five fairly steep and high hills. This punished the horses terribly. Despite the cool morning their sides were lathered in sweat. All signs of friskiness now had worn off. There was no energy to be wasted. Each horse had settled down to his work and each one stuck to his post with a pride and gallantry which went to my heart. Ahead of me were two little four-year remounts. One of them was carrying three hundred and ten pounds of rider and equipment. Already he was tiring, but as every trot began he was off with the rest without any need of urging. I began to sense again, as many times before, that magnificent esprit and splendid cohesion which hold together the horses and men of a cavalry troop. I began to feel the spirit of cavalry. Amid such reflections the column turned to the right. And now for the first time that day I saw the fluttering red and white of the guidon and the troop moving at a trot in an indescribable poetry of motion. Ah, you should have seen it!

We were now nearing our mid-day halt. We dismounted, loosened cinches and led the horses in for the last mile. Passing through a village, we crossed the tracks of the Southern Railroad and marched in single file into a wide field, along the edge of which flowed a stream. It was nine o'clock. We had covered 23.3 miles by map.

At the edge of the field we found a motor truck, in which were picket lines, forage and food. In a few minutes three-foot iron stakes were driven into the ground at 50-yard intervals and a stout line strung along their tops. Under this picket line were spread three bales of hay. Bridles were removed and the halter ropes secured to the picket line. As the horses turned to on the hay their saddles were taken off. The saddle blankets were left on to prevent the horses' backs from being dried too quickly in the cool air. Sergeants produced from their saddle bags bottles of red liniment. We rubbed this into the horses' legs while they munched away calmly at their well-earned hay. After ten minutes of this massage the saddle blankets were removed; then the backs were patted and rubbed until entirely dry. A thorough grooming was next in order.

Each squad in turn now led its horses down into the stream. The quantities of fallen leaves which choked its channels had made the water dark and bitter. So the horses did not enjoy their drink. When they were again secured to the picket line nose bags were filled with oats and fastened over their heads. I had carried no nose bag, so my mare had to wait until we could extemporize one for her. This "bad staff work" did not meet with her approval.

All this work on the horses had taken about one hour and a half. Now it was time for the soldiers to get their lunch. This the mess sergeant had provided in rare abundance; red-hot coffee, fresh milk, sandwiches, juicy red apples, and pie. After the food had been gulped down we went back to the picket line. It was almost time for us to take the road again. Horses

were saddled and bridled. Equipment was adjusted. Platoons were formed. We led out into the road for our return journey, twenty-seven miles.

Just as we started the rain began. It continued during all the march; sometimes it diminished to merely a disagreeable drizzle but always it increased again to a really penetrating, though not very heavy, rain. Soon the red clay roads which had made such fine footing earlier in the morning were covered with an inch or more of slippery mud. This layer became thicker and thicker as we marched on. On the steep grades,. where the mud was thin, the horses' feet slipped with every stride. On the level stretches, where the mud was deep and sticky it gripped their feet like glue. As we dismounted to lead we stumbled and slid through the mud alongside our horses. Boots were caked with sand and clay. Frequent inspections of the horses' feet had long since covered our hands with grime and grit. The cool wind drove the rain into our faces and through regulation khaki-colored woolen shirts. Saddles were wet and slimy when we mounted up.

But all this was a picnic for us compared with the work of the horses. The rain and mud must have doubled their toil—already severe enough. Those long trots over that continuous roller-coaster of slippery hills must have been a very hell for them. I remember when we reached the forty-mile mark. Every horse was tired now, but each stuck gamely to his post and would, we know, until he was ready to drop. I was riding now behind the machine rifle platoon. Its led horses were carrying dead weights of two hundred pounds. And these weights, except for our midday halt, had never been off their backs. During the leads and rests the other horses had some chance to regain their energy—but not these poor fellows. Ahead of me rode the bugler on a beautiful little remount mare —one of my friends on many a long ride. The gentle remonstrance I saw in her brown eyes reminded me of that legendary protest of the Prussian grenadiers on the field of Kolin: "Fritz, haven't we done enough to day for our eight groschen?"

Picture us as we trot along this woodroad. The troop now would not make a favorable appearance as a presidential escort. But every horse and man is in his place and every platoon is well closed up. There is an appearance of efficiency and cohesion in this rain and mud which the experienced eye does not see in a formal parade through the streets of the capital.

Listen to the music we make: the crackling and crunching of the gravel; the rustling and creaking of the leather; the dull flopping of the saddle bags against wet coats; the jingling and chinking of the bits and curb chains; the sharp cracking of iron against stone; and the muffled drumming reverberations of a hundred hoofs beating rythmically upon the ground. These sounds blend into such a symphony as no orchestra could ever play. It still rings in my ears!

These last miles were hard ones. As we reached each crossroad or other point on our schedule of distances we figured out the remaining miles—even the tenths—and passed the word back along the column. Before we came to each hourly halt the troop commander at the head of the column would dismount and watch the troop file before him. His quick eye took in the condition of each horse. From this he made an estimate of their collective reserve power and decided how hard he could push them and still keep them all in ranks. When we commenced the return march, he had about half an hour's leeway over the planned schedule. He had kept this intact until now, but when we had only five or so miles to go the pace was slowed gradually so as to make certain of bringing all horses through in good condition.

As the horses began to recognize familiar landmarks their spirits rose and the old spring came back into their muscles. During our last trot we had a good road and made the distance fly. For the last mile we led, with loosened cinches. At 4:45 P. M. we marched into the stables with every horse in ranks. Here the mess sergeant was waiting with an immense can of red-hot coffee. You can imagine what a good business he did. Afterward there appeared the familiar bottles of red liniment—only larger ones this time—and the massaging and grooming of horses was again in order.

Excluding our two-hour midday halt, we had covered about fifty-four miles in ten hours and three quarters. This average of five miles an hour is a very good rate of march for cavalry with full equipment. But under our difficult conditions of hilly country and muddy roads the troop had made a highly creditable performance. Next morning a board of three officers inspected the horses and pronounced all fit to continue the march.

I have endeavored to present rather an intimate picture of cavalry on the march. In addition to showing the methods used by a troop in making a long hike, I have tried to give you an insight into the spirit of cavalry. From the early days of history the combination of horse and man has generated a spirit of alertness and confidence. Every horseman has felt this indefinable influence and has acquired something of this spirit.

But when a number of horses and men are massed together and welded into a unit something even finer develops. Alertness still remains. Confidence becomes resolution. Cohesion appears. And finally there comes a spirit of movement—no, more than movement: momentum. There is a feeling that when cavalry is set in motion, its momentum will carry it forward, long after the influence of its commanders has ended. This has been proved on many a battlefield. This march proved it to me. When a final limit is set to its efforts, it can always do just a little more—go a little farther. Its momentum carries it along after its strength has been spent. That is how I interpret the spirit of cavalry. And that spirit has decided the issue on many a gridiron and battlefield.

Evaluating the Reserves

By Lieutenant Colonel H. A. Finch, Corps of Engineers

AFTER more than a century of national life without any complete or comprehensive law providing for our defense, our Government for only a little more than a decade has been testing such a law, the National Defense Act, originally enacted in 1916 and revised in 1920. Those who have studied our history and can appreciate how our heritage has affected our attitude toward the military arm, have been astonished, not at the difficulties encountered in applying the provisions of this basic law, but at the successes achieved under it. This statement may best be illustrated by considering the peace time operation of a single provision of the Act, that covering the formation of an officers' reserve corps.

Among our many deficiencies in 1917-18 none was brought home to us more forcibly than the necessity for advance preparation for the future officers of the Army if we were to count on placing forces in the field with speed and efficiency. The Officers' Reserve Corps provision of the National Defense Act was, of course, designed to make possible such advance preparation. Let us consider what has been accomplished in this respect, starting with a brief tabulation of basic statistics:

Total Officers, Reserve Corps enrollment on June 30, 1930	113,273
Deduct National Guard officers with reserve commissions	11,891
Officers holding reserve commissions only	101,382
Reserve officers carried on "unassigned" list	21,300
Reserve officers carried on "assigned" list, approximately	80,000

The "unassigned" group members are not eligible for active duty or promotion so long as they occupy that status. Of the 80,000 "assigned" Reservists, approximately 42,000 enroll annually for some form of military training, this total being subdivided as follows:

Active-duty training	22,393
Conference courses (with no active duty)	9,714
Extension courses (with no active duty)	5,270
Conference and extension courses (with no active duty)[1]	4,899
Total	42,276

[1] Includes those who enroll for both the extension and the conference courses. Half of the active-duty group (22,393) enroll also for inactive training.

The annual cost of 14-day active duty training averages $135.53 per trainee, and the yearly federal appropriation to cover all reservist training now totals around six and one half million dollars.

For instructing reserve officers the War Department furnishes 469 officers and 538 enlisted men from the permanent establishment. To insure the maintenance of certain standards, the War Department also prescribes limitations as to promotion of reservists and duration of reserve commissions. These are:

a. That commissions shall be issued for periods of five years only, subject to renewal upon evidence that the officer has performed not less than 200 hours of military work during that period.

b. That an individual must serve not less than three years as a second lieutenant, four years as a first lieutenant and five years as a captain before he is eligible for promotion to the next higher grade.

c. That before a reserve officer may be promoted he must either pass an examination or complete satisfactorily a designated series of army extension courses.

While the total enrollment in the "straight" Officers' Reserve Corps (101,382) is quite imposing, the facts that 22,000 are carried on the unassigned list and that only 41 per cent of the full enrollment are active in taking any form of military training have not escaped notice. In fact the situation has disturbed many observers, both among Reservists themselves and in the Regular Army, that organization which is held responsible for the standards of training applied to their brother officers.

A reserve officer writing in a recent number of the *Coast Artillery Journal*[2] emphasizes his conviction that the ORC is suffering from what might be called inanition. Diagnosing the ailment he, as all good doctors should do, prescribes what he considers to be effective remedies. The subject is seriously treated and the remedies suggested are entitled to respectful inspection. No one familiar with the plan for our country's protection in war can remain indifferent to any deficiency in an organization from which the bulk of officers for war duty must necessarily be drawn.

The writer referred to cites four major causes that, in his opinion, are responsible for the failure of the majority of our Reservists to take any interest whatever in military training.

a. Length of Service in Grade. With seven years to serve in the lieutenants' grades and five as a captain, a young reservist, starting at 25 years of age, will be at least 37 years old before he can attain field grade under the present regulations. Consequently, it is argued, to the energetic, impulsive, aggressive young man of the current generation the outlook is discouraging from the very start.

To offset this feeling the remedy proposed by the writer quoted is to remove all time limitations on service in grade and to promote the Reservist as fast as he can qualify for the higher grades before examining boards composed of not less than 50 per cent of

[2] "What's the Matter With the Reserve?" by Major F. J. Baum, 605th Coast Artillery, in the February, 1931, *Coast Artillery Journal*.

reserve officers. The one restriction imposed would be the stipulation that a vacancy had to exist before the promotion could be made.

With due respect for the evident sincerity behind the suggested procedure, it appears ill advised, to say the least, to promote young officers in the fashion indicated. Since no practical tests in leadership or the management of men can be imposed by the boards referred to, the result would doubtless be the promotion of "book soldiers" who happened to have the time to do the studying required and possessed the intelligence to pass the book tests. One may be permitted to question the soundness of the writer's belief that, "immature and unsatisfactory officers could easily be held back by the board." Evidently he has had limited experience with board "technique"! How could the board function adversely on the "immature" aspirant for a major's leaves if he passed the tests required? How could his immaturity be gauged?

The curious point about this "remedy" is that the reserve officer suggesting it admits that regular officers have to serve much longer periods in the grades indicated and that such service is needed to fit the individual for his increasing responsibilities. But it is nevertheless argued that the Reservist should be promoted anyway because he is *not* a professional and will become impatient if he is not advanced promptly. If it is admitted that an officer's responsibilties in war are heavier than in time of peace, what would happen to us if we went into a war with officers who had been so sketchily prepared for their duty, who had been permitted to attempt to run before they could walk?

b. Life of reserve commission. Another deficiency noted by the writer referred to is the short life of the present reserve commission. To quote, "A reserve officer holds a commission which expires in five years. To enable him to renew it, he must do a certain amount of work. When he begins to drop behind due to extra business activities which directly affect his income, he contemplates the long hours of strenuous work required of him before the date his commission expires, and feels that he can never devote the necessary time to the work. So he shrugs his shoulders and drops all activities. 'What's the use?' he argues, 'I'm bound to lose my commission in another year or two anyway.'"

The "remedy" proposed for this evil is to issue to the Reservist a commission good for life, assuming "decent conduct," and with the proviso that the officer shall pass a physical examination each year and do a certain number of hours in school or extension work annually or pass to an unassigned status. It would also be provided that he could escape from that status by "catching up" on his work.

Beyond any question it will be conceded that the living which the Reservist must make should be placed before any obligation he may have assumed in the field of military work, but an examination of the time involved reveals little basis for the expression "long hours of strenuous work" quoted above. Explicitly, a Reservist, in order to qualify for a renewal of his commission, must perform not less than 200 hours of military work in five years' time, an average of 40 hours per year or less than one per week. Each encampment attendance of two weeks is counted as 100 hours, hence a Reservist has but to attend camp twice in five years to acquire the necessary credits. Or he may (if his branch provides the instruction) solve five map problems (one a month) and attend five meetings of a reserve class each year to receive 40 hours credit annually. A reasonable allotment of time to extension course work by mail, say one hour per week over the autumn, winter and spring months, will also put the Reservist on the right side of the time-credit ledger. Considering these basic figures, it appears that the evil lies not in the fact that the hours are too long but that the duty required is too uninteresting. As a general rule it may be stated that men can nearly always find time to do what they really *want* to do, assuming only that it is within their financial means and mental capacity.

c. Lack of sufficient active duty to hold the reservist's interest. According to the writer quoted herein, it is active duty that has the greatest pulling power with the Reservist, and the statement is advanced that if the average officer gets to camp once in three years with his organization he is lucky. The wide applicability of this statement is open to question, since in a number of branches it has been established that the regiments attend camp every other year, if not each year, and that from 50 to 75 per cent of the trainees are "repeaters" of several years standing because not enough new men will enroll. For the ORC as a whole, 25 per cent of the active-duty trainees are repeaters. One may enthusiastically endorse the contention as to the greater interest carried by active field training as compared with home or classroom study, but how can the latter be eliminated with safety, The reserve officer quoted states that "most of the extension course work, *while very essential,* is dry and uninteresting." Consequently he would merely replace much of it by field training. Granting that the impatient American looking for a "get-trained-quick" military course will find home study work quite uninspiring, the sober fact remains that much theoretical classroom work must precede the practical work if any degree of progress is to be made in the latter.

To correct the situation just described, it is proposed to pay each Reservist "a nominal monthly sum provided he has completed a satisfactory number of hours work in the extension courses, or unit and group schools during the current month." It is further proposed to give each Reservist the opportunity for two weeks' field training each year. These proposals are sound, if the assumption is made that the money will be forthcoming from the public treasury. The fact that the federal Government now pays out upwards of 32 million dollars annually on the support of the National Guard is doubtless the most important single factor in holding the Guard together as an effective force. There is no question but that additional millions added to the millions now expended annually by the taxpayers on Organized Reserve training would have a beneficial effect, but it is also certain that no amount of money compensation can alter the fundamental relationship that should exist between theoret-

ical and practical military training. Considering the nature of this training, together with the non-military tendencies of the average American, it is doubtful, however, if "nominal monthly payments" would add greatly to the number of Reservists who take advantage of the training that is offered; it is more likely that those who already take some training would find time to increase this amount.

Two other contributing causes for reservist indifference are cited by the writer quoted. They are, the tendency to allow "dead wood" to remain assigned to organizations, and the all-pervading talk of permanent peace. The remedies proposed are sound enough. In the first case, discontinue the practice of making such assignments, and in the second, merely recall the history of this nation. In connection with the first of these two points it may be said that, so far as known, there are no cases in which a commander of a reserve unit needs to tolerate "dead wood" among the officers assigned to his organization. A request to the corps area authorities for relief from such encumbrances is usually all that is required to be rid of them.

If a canvass were made it would no doubt disclose a great mixture of motives that underlie the action of upwards of a hundred thousand Americans in enrolling in the Officers' Reserve Corps. Patriotism in some form or other unquestionably plays a part; other incentives probably include the spirit of fellowship, a consideration of the local advantages inherent in membership in some military organizations, and a natural desire for self-improvement or self-aggrandizement. It has been alleged that some reserve officers drop out after a brief commissioned service on the theory that, having once been members of the Reserve, they will receive commissions anyway in the event of war. Clearly such men are animated less by love of country than by hope of gain.

Whatever the motives that underlie reserve membership in the individual cases, it may be said that, taken together, these hundred thousand men represent a fine element in American citizenship. At the same time it may be admitted that many of these officers run true to American form in their impatience with the slow attainment of proficiency in military work under intermittent and inadequate instruction. Refusing to admit that there is no royal road to such proficiency, they cast about for "remedies" and "short cuts." If certain training is uninteresting, however essential it may be, by all means throw it out and bring on something interesting.

The truth appears to be that no system of military training will ever make a wide appeal to our people, and certainly the appeal will lose force to the same extent that the regular, the trainer, does his job in a perfunctory spirit. Inactive training, home study or classroom work, is necessary to make the field training worth while. And the one sure way to make inactive training draw attendance is to organize in all of the larger towns and cities, reservist branch classes for work on map problems that apply to their arms, and for participation in war games prepared by the professional who is guiding the group. Lectures are often so much wasted time; extension courses *are* uninspired; smokers and such semi-social gatherings have no military training value; but class assemblies for working out map problems once a month under competent leadership—these have the necessary pulling power and are worth the effort put into them.

A stern business, this matter of preparing one's self and others for war duty. The regular army man on instructor duty with the civilian elements of our army needs in his equipment something else beside technical proficiency in his branch specialty. He must have the ability to carry classes with enthusiasm through the study of problem after problem; he must compete cheerfully with a multitude of diversions and amusements, not to mention the customary "tired-business-man" inertia; he must cultivate and exercise plenty of patience; he must be willing to devote hours of labor to the work for which he is paid.

Everything considered, the present situation is not so bad. Under the current regulations if a reservist does not report for training he at least costs the country nothing. We have today, thanks to the National Defense Act, a group of 42,000 reserve officers who are receiving some military training each year—and as our instructors become better the number will increase.

Bits and Bitting

By Captain R. S. Ramey, 9th Cavalry

HOW often we see a horse led from the stable by the groom, the rider mount without even a cursory glance at the adjustment of the equipment, particularly the bridle and the bitting! And almost as often we see a horse, ridden by one accepted as a horseman, restive, throwing its head and otherwise trying to announce its discomfort when a glance is sufficient to note that the trouble arises from an uncomfortable, evilly adjusted bit. Under such conditions how many riders have we seen mistreat their horse and call him all sorts of names! Yet the fault was all the rider's, his negligent failure to note, before mounting, the poorly adjusted bridle or bit and later to understand the distress signals of his mount. I venture to state that all of us have noted at some time an example of such carelessness.

So, in the hope that the number of such unfair and unpleasant experiences may be lessened and that a little more thought and discussion of this extremely important phase of horse management may be excited, the following paragraphs on bits and bitting the riding horse are written.

It is realized that this subject, like all others associated with the horse, is controversial; colored by the personal likes and dislikes and, too often, by the idiosynerasies of the individual. For these reasons let it be understood that we are, in this article, to look at bits and bitting from a practical point of view, to deal with that which is generally accepted and advisable for the average run of riders and mounts, and to talk about bits recommended for the average horse ridden by the average rider.

Before undertaking an examination of the various types of bits, their uses and application, let us clearly understand the action and effect of any bit on the mouth of the horse. Generally speaking, all bits, excepting outlandish contraptions, of which there are many, transmit their effect to the bars of the mouth of the horse. The contact with the bars will vary with the structure and conformation of the particular mouth. Some mouths have the bars, that area of each side of the lower jaw which is devoid of teeth, covered with a much thicker membrane than others. The sensitiveness of the mouth is directly in proportion to the thinness of this membrane. In other words, the thinner the covering over the bony structure called the bars the more sensitive the mouth of the horse and the more rapid is his reaction to any bit. The action of the bit is also affected by the thickness of the lips and of the tongue and by the conformation of the mouth.

Of course, it may be truly said that this is something over which the rider has no control. Nevertheless, appreciation and knowledge of the foregoing may aid in the selection of a mount and certainly in the bitting of one sensibly. Subscribing to this, let us examine the construction and effect of the most common and most useful of all bits—the snaffle.

The ordinary snaffle (see figure 1) is a bit composed essentially of two pieces of metal varying in diameter from very small to the large diameter as found in the so-called hunting snaffles. The mouthpiece of the snaffle is composed of two slightly curved, conical sections linking together at the small ends, uniting them but leaving them mobile one on the other. The two sections of the mouthpiece are technically known as cannons. The larger or outer extremity of each cannon is pierced with a hole into which fits a ring of which the diameter varies with the type of snaffle. In any type the rings should be large enough to permit the inserting or mounting of the reins.

The snaffle bit is very mild in its effect acting as it does, for the most part, on the lips and very slightly on the bars of the mouth of the horse. Consequently, it is with the snaffle that we should commence the bitting of the young horse. For like reasons, the beginner and the average rider should normally bit his horse with a snaffle. The mildness of the snaffle renders its effect less irritating to the mouth of the young horse or to the faults of the hands of the inexperienced rider. Naturally there is, in both cases, less chance of physical injury to the mouth of the horse. For the young horse or the beginner rider, a snaffle with a mouthpiece of large diameter is advisable. As the young horse becomes more accustomed to the metal in his mouth, or as the beginner rider becomes more adept in his handling of the reins, as a result of a more secure seat, we should progress to two snaffles of smaller diameter, commonly called double snaffle, which will give the rider more effect on the mouth of, and control over, his horse. But let me reiterate, the young horse will accept much more calmly a large snaffle at the beginning of training; will begin the much to be desired mouthing of the bit more rapidly; and there will be infinitely less danger of injuring his sensitive lips and the bars of his mouth.

The double snaffle has the advantage of permitting different combinations in the application of the reins. The effect of one rein may be applied directly, the other diagonally. Or three reins may be used in one hand, the fourth in the other, to raise the head of the horse, to turn his nose, etc. Furthermore, various applications of the reins may be used to teach the horse the flexions and decontractions of the jaw and poll.

So much for the ordinary snaffle under normal conditions—the horse going quietly without resistance. In case he resists, refuses to turn for example, if we apply unequal tension on the reins, the bit will probably slip laterally; one of the rings of the bit may pass

into the mouth of the horse. To prevent this, which would only serve to further irritate and upset the mount, we may have recourse to one or more of the following arrangements:

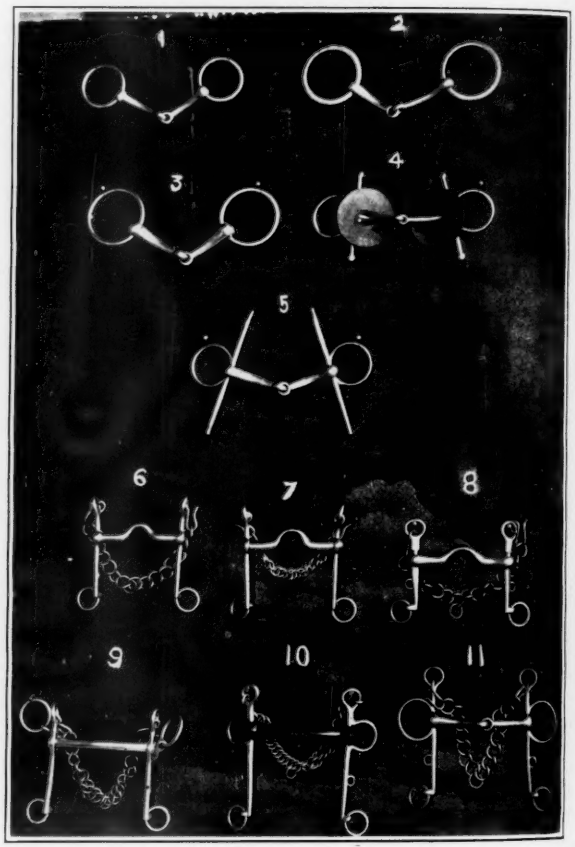
1. Rings with very large diameter. (See figures 2 and 3).
2. Shanks tangent to the rings and a part thereof and extending on both sides of the rings so as to fit across and against the lips of the horse when the ring tends to enter his mouth. (See figures 4 and 5).
3. A shank which projects from one side of the ring only.
4. A large disk of rubber or leather placed over the outer extremity of each cannon and resting between the ring and the lips to prevent the ring from pulling into the mouth. (See figure 4).

Then, too, in the case of a horse with a very sensitive mouth, it will often be found advisable to cover or wrap the bit with either leather or rubber, preferably the latter. The large, soft feeling mouthpiece will often serve to quiet a horse otherwise inclined to become restive from an uncomfortable bit; it will certainly induce in the young horse the much to be desired mouthing of the bit.

Occasionally it happens that a young horse develops the unfortunate habit of slipping the tongue over the bit or behind it. When this happens—and with the young horses the trainer should be alert for the first indication thereof—radical means may have to be resorted to in order to correct the vice in its incipiency because the bit is immediately more painful and the horse will become more and more unmanageable as a result of the pain and the attitude of resistance induced. First, be sure that the bit is well up in the horse's mouth. Frequently, the young horse will get his tongue over the bit for the simple reason that the bit is improperly adjusted.

One of the most successful means tried by the writer to prevent getting the tongue over is as follows: punch a hole in each cheek strap of the bridle midway between the attachment to the snaffle ring and the browband; next tie a thong around the ring and cannon at one side of the bit, pass it across the nose of the horse leaving the thong long enough to be able to pass it across the nose well above the nostrils to avoid interference with the breathing process; now with another thong tie the one attached to the bit well up on the front of the nose, utilizing the holes punched in the cheek straps as points of attachment for the second thong; finally fasten the throat latch a little more securely. In most cases this arrangement will cure the habit in a few days. Another method is to attach the middle of the thong to the joint of the two cannons and then tie the two ends, one coming out of each side of the mouth, directly to the middle of the noseband in front. The noseband should be adjusted high enough to obviate interference with nostrils. Where the habit has been allowed to persist for sometime, it may be necessary to resort to the device for some weeks. In persistent cases resort may also be had to a concurrent aid; *i. e.*, allow the horse when eating to carry in his mouth a snaffle of very small diameter mouthpiece. By this means he will come to realize that the bit is more comfortable over than under the tongue.

Now let us turn for an instant to the important consideration of the adjustment of the snaffle bit in the mouth of the horse. It would seem superfluous to say that the snaffle or snaffles are placed on the bridle so that, when tension is placed on the reins, the rounded parts of the cannons convex forward. In other words, when the bridle is held in the hand, the two cannons form a slight curve to the front of the bridle. With the bridle properly adjusted, the cheek straps of proper and equal length, the mouthpiece of the bit rests lightly against the corners of the mouth in such a manner as



to barely wrinkle the angle formed by the junction of the lips. If this is not so the bit will fall too low and strike the incisors or tusks of the horse. Even though not low enough to strike the tusks, the play of the bit in the mouth will cause the horse to throw its head. In either case the tendency will be to affect adversely the calmness of the mount. Again, with the bit too low, the cheek straps will bulge and loop out from the cheeks when tension is put on the reins. If the cheek straps are adjusted too short, that is, with the bit too high, the corners of the lips will be severely wrinkled and pinched and the horse, correspondingly uncom-

fortable, will be restive and prone to fail to respond to the demands of his rider. The adjustment of the double snaffle should follow generally the same rule as for that of the single snaffle with this slight variation; the cheek straps should be adjusted so that one bit will lie snugly against and underneath the other in the horse's mouth. The upper bit will be the one carrying the reins which correspond to the snaffle reins of a bit and bridoon bridle.

There are numerous variations of the snaffle bit ranging from one with a double jointed mouthpiece to the ones with branches on either or both sides of the ring. But whatever may be the addition to it in the way of branches, the common smooth single-jointed snaffle with the mouthpiece of fairly large diameter is unquestionably the most acceptable and useful of all bits. (See figures 2, 3 and 5).

Now let us consider the next most common and useful type of bit for the practical horseman or horsewoman—the curb. But, in order to do so intelligently, first let us look at the construction of the lower jaw of the horse. His lower lip and muzzle are covered with a thick skin beneath which are found the roots of the beard and the membrane. This structure is continued up into a depression underneath the chin known as the chin groove. The smooth bone of the chin groove being protected by thick skin is not very sensitive. It is the point where the two branches of the jaw begin to unite and is flat and rounds off in all directions. A curb chain acting in this groove can exert considerable pressure without inflicting unreasonable pain on the horse. Just above the chin groove the character of the bone and skin covering changes radically; the bone has sharp edges, and the skin is thin and sensitive. The slightest pressure on this area will cause considerable pain. In bitting a horse with any form of curb, the foregoing points should be fully understood, appreciated and remembered. If the curb chain rests too high, there is every danger of cutting the skin and of breaking off small particles of the thin edges of bone; at the least, of unnecessarily paining the horse. The ordinary curb bit (see figure 6) is composed of two shanks called branches, completed at one extremity by an eye to which is attached the cheek strap of the bridle and at the other extremity by a movable ring to which is attached the rein. The branches are united by a mouthpiece of metal, the length of which varies with the width of the mouth of the horse for which intended. Each side of the metal piece is called a cannon and bears on the bars. The cannons are cylindrical and may be continuous or, as in the regulation curb of our Army, be separated by an elbow called the port in which the thickness of the tongue may play, thus permitting the cannons to bear more strongly on the bars. It follows, then, that the greater the liberty of the tongue the more severe the bit. Conversely, the mildest curb is that one which gives the least liberty of tongue either as a result of the absence of a port or of curvature of the mouthpiece. In addition to the parts already enumerated and described, the curb bit is completed by the curb chain which may be of varying sizes and types of links and is attached to the upper part of the branches by hooks fixed in each eye. The chain, in turn, should be held low, in the curb place of the chin by a thong attached on either side to an eyelet in the lower portion of each branch and passing through a ring added in the center of the curb chain.

It goes without saying that the curb is decidedly more severe than the snaffle and, consequently, demands to be used with greater precaution. It should not be employed by any rider until he is master enough of his hands to manage it with delicacy. The less secure the rider is in his seat, the more likely he is to injure the horse's mouth; hence, there is only one type of bit for him to employ under the circumstances, the snaffle or double snaffle. Even when the fixity of seat is sufficient, there is no rush to adopt a more severe bit except where the trainer requires; the mildest bit that can be employed to obtain the necessary obedience is certainly the best. Before resorting to a more severe bit, remember that there is always a chance that the horse is already too severely bitted and that a more severe bit will only serve to increase his resistance.

One more caution with reference to the choice of a curb; one that is too narrow for the particular mouth will vitiate the effect because the branches will rest along the lips of the horse. Also, the horse is likely to adopt the vicious habit of taking the branch on one side between his lips or teeth. This may happen, too, where a thong is not used in connection with the curb chain. On the other hand, with a mouthpiece too wide, the curb chain will tend to rest on one point and be correspondingly more severe and the bit will have lateral play. In general, the curb should rest in the mouth of the horse with the mouthpiece not nearer than one inch to the tusks of the male or about two inches above the corner incisors of the mare and, where the length of the mouth renders this possible, approximately opposite the curb chain groove.

As in the case of the snaffle, there are an infinite number of variations and applications of the principles of the curb bit. But, generally speaking, it can be taken for granted that the more complicated the bit the more likely it is to be evil. An excellent rule to follow is to leave to the other fellow the freakish and outlandish contraptions sometimes denominated as bits and always claimed as capable of producing wondrous results. It is painfully easy to injure or affect the sensibility of your mount's mouth but discouragingly difficult to reclaim or make over the mouth once injured.

There are some special bits which will be found useful and effective. But before adopting one or more, assure yourself just what it is you desire to accomplish. Having carefully studied the temperament and mouth of your horse and, equally as important, your temperament and hands, select a bit which, by its construction, promises to act on the mouth of your mount in a manner to secure the result which you seek.

Let us, therefore, briefly consider a few of the more common special bits—those generally accepted by

practical horsemen—and see what is their special utility.

First on the list are any curbs, of which there are several, whose branches are shorter (see figures 7 and 8) than the normal or regulation curb (see figure 6) which will be used as a medium of comparison. Recall that we found that the severity of the curb varied, among other factors, directly with the length of the branches. Accordingly, any curb bit whose branches are shorter than the regulation curb will be found to be milder, provided that two other parts remain unchanged: *i. e.*, the port and the diameter of the mouthpiece. Remember that with a wider port or smaller mouthpiece the bit becomes relatively more severe. For hacking, hunting, and, in some cases, for polo, where a little more prompt response to the bit is demanded and where the horse does not respect quite enough a snaffle, we may very successfully bit our mounts with this very mild short-shanked curb. The leverage action is much more mild than that of the regulation curb, but the bit is more powerful than any of the snaffles.

Another variation of the same type of curb is one where the mouthpiece slides up and down on the branches (See figure 8). Different ones of this type bit have different degrees of mobility of the mouthpiece. This style of bit is particularly suitable for a horse inclined to be stiff jawed or to set his jaw when tension is put on the reins. The mobility of the mouthpiece will often tend to induce relaxation of the jaw.

Next in order of severity (still comparing with our regulation curb) come the curb type bits with less than the normal sized port down to those having no port whatever. Some of the latter are constructed with the mouthpiece curved so as to allow tongue space. Depending on the degree of this curvature, the bit may be more or less severe. Let us remember that we found that one of the factors influencing the severity of the curb bit was the smallness or largeness of the port; whether the pressure of the mouthpiece was tempered by the tongue or if the cannons pressed directly on the bars. In general, then, any bit with larger than the normal port is relatively more severe.

A very severe type of curb bit and one to be used only as a last resort is any form of the curb principle whose lower branches are proportionately longer than normal. A few bits of this type found on the market are murderous. Recall the principle of mechanics; roughly put, the force exerted by a lever varies directly with the length of the lever arm. The lengthened lower branches increase tremendously the force exerted by the rider on the jaw of the horse. For this reason, every other means should be exhausted before resorting to a bit of this extreme construction.

In addition to the common type curb bits there are a number of other special bits which conform, in varying degree, to the principles of the ordinary curb; some are more severe, some less severe than the ordinary curb. The more common of these special bits are a group known under the trade name of Pelham.

1. Probably the most common and, certainly in our Cavalry Service, the most widely used of the Pelham bits is the Rugby. (See figure 9.) It is particularly recommended for polo. By its construction with short branches, medium large, slightly curved mouthpiece, and the additional mounting rings permitting the application of the snaffle effect, this Pelham is only slightly more severe than a snaffle. With the Rugby Pelham, one of the disadvantages common to all Pelhams, can be corrected. I refer to the action of the curb chain whose effect on all the Pelham bits is transmitted too high on the jaw of the horse. With the Rugby Pelham the curb chain, which, for this purpose, will have to be longer than is normally necessary, can be passed over and under the snaffle mounting rings, thereby keeping the effect low.

One of the advantages claimed for all Pelham bits is that by using the upper rein attachments the snaffle effect only may be used, leaving for emergency use the lower or curb set of reins. This is not strictly correct because, in place of a true snaffle action, the upper reins exert a pincer effect. An objectionable feature of most Pelhams, the Rugby excepted, is the disproportionate length of the branches. The use of such Pelhams is open to serious question. The disadvantage is counteracted, however, by making the mouthpiece large enough to offset the extreme length of branch, (see figure 10), and by covering it with rubber or some composition.

2. A very widely used, yet one of the most objectionable Pelhams, is the so-called broken Pelham. (See figure 11). This bit is constructed with a jointed mouthpiece of small diameter. It is very generally claimed for this bit that it is only slightly more severe than a snaffle with mouthpiece of the same size. Unquestionably this is true if no curb chain is attached. But with a curb chain, it is impossible to place the chain in its correct location and, at the same time, have the mouthpiece properly placed in the mouth; the effect of the chain is transmitted too high on the sensitive points of the jaw bone. The only use of the broken Pelham recommended is for a horse that habitually carries its head too low; this bit will be likely to bring the head up. But most horses will only be irritated and made restive by this particular Pelham, because of the undue pain caused by the curb chain.

3. Without doubt the most severe of all the Pelhams is the Hanoverian. It differs from the others in having a jointed mouthpiece united by a high port and the sides covered with rollers. This bit is not recommended for any horse.

In conclusion, let us repeat four simple maxims of bitting: First, use the simplest and mildest bit that the horse will respect. Second, as a general rule, the more complicated the bit the more evil it is likely to be. Third, progress to a more severe bit with the greatest hesitation; a little study will probably result in the rider's changing, not the bitting, but his own manner of using the bit. Finally, if your mount is resisting the bit, it may be either because of the poor adjustment of the bit, the faulty action of the rider's hands or because the horse is already too severely bitted.

Foreign Views on Mechanization

England

THE Journal of the Royal United Service Institution for May, 1931, prints a lecture by Colonel Sir Frederick Pile, Bart., D. S. O., M. C., on "The Development and Future of Armoured Fighting Vehicles."

According to him, the British Army stands very well ahead in matters of mechanization generally, and particularly in the development of armored fighting vehicles. To quote him, "Indeed, it might be a matter of difficulty for most other nations to reach in peace time the level which we have now attained. It would involve converting the ideas of those nations to armoured war, and it would entail the expenditure of a great deal of capital, apart from a very considerable outlay in trial and research. It seems probable, therefore, that in the event of war, we should now be ahead of other nations as regards both the quality of our armoured fighting vehicles and the ideas underlying their use." He thinks, however, that this advantage would be neutralized by the vast production capacity of countries like Germany, if England were caught by an outbreak of war with too few vehicles.

With reference to the purpose of the armored fighting vehicle, he states simply that the tank came into being in order that men in battle might cross the final 200 or 300 yards of a zone, bullet swept and protected by barbed wire, without danger to themselves. "And from a tank which originally developed as a means of *crossing* bullet-swept zones has now evolved a machine capable of *avoiding* bullet-swept zones, of travelling great distances and fighting battles at the end of them."

Colonel Pile discusses four types of vehicles: the medium tank, the light tank, the armored car, and the machine gun carrier.

The Medium Tank

The medium tank weighs 16 tons; it has a 180 h. p. Armstrong-Siddeley air-cooled engine. It has stamped steel tracks with a life of 2000 miles or more. The suspension is much improved. Three turrets are fitted. The middle turret has a 3 pounder and a .303 coaxially mounting. The two smaller turrets have .50 or .303 machine guns. Arrangements for control by the commander have been simplified, and the tank provides a very steady gun platform. Among various safety devices, there is a Pyrene extinguisher system, which either the tank commander or driver can loose at will. A direction indicator now being tested is giving good results. The gasoline system is situated on the top of the mud guards.

The ingress of poison gas is prevented by an electric fan which maintains a small positive pressure.

The Light Tank

"To understand the difficulties in the way of the construction of a light tank, it is essential to maintain a clear picture as to the rôle of such tanks. First of all they are scouts; so that their duty is to precede the medium tanks, to send back information as to the situation, to discover possible opposition, and to be able to put up such defense as would allow the medium tanks to arrive. Then in the attack, they must be capable of producing a high rate of well-aimed fire. As they are the skirmishers of the armoured brigade, they will be required in great numbers and, therefore, they must be cheap. This, then, is the problem: to build a cheap vehicle, a fast vehicle, a vehicle containing radio, a vehicle possessing sufficient stability to enable a gunner to aim accurately, and, lastly, a silent vehicle."

There is controversy as to whether this light tank should be a 2- or 3-man vehicle. At the moment, the 2-man light tank holds the field.

The Carden-Loyd chassis of today has a very short track base, but in spite of this fact, a system of suspension has been produced which, while not perfect, enables the gunner to keep his eye to the telescope while crossing most sorts of country and makes the vehicle more comfortable to ride in.

"As regards speed, a Meadows engine which develops 60 h. p. has been adopted, and the tank thus possesses just enough speed to scout in front of the 16-ton tank. Actually one of these light tanks recently covered ninety miles in three hours exactly. The track life is good. The armament is either a .303" M. G. or a .5" M. G.,"

The Armored Car

After the war, the requirements laid down by the General Staff visualized a heavy armored car and a light armored car, with the idea of supporting the latter by the former. "With the advent of the light fast tank and the medium tank, capable of covering great distances at high speed, the need for supporting the light armoured car with a heavy armoured car became less apparent. All wheeled vehicles possess inherent disabilities in crossing rough country. On mud they develop wheel spin and dig themselves in, while a small ditch into which the front wheels can drop is a complete obstacle to them. At the best the cross-country capability of a wheeled vehicle is limited. If, therefore, a track vehicle could be brought up in support of light armoured cars in reasonable time, it would prove a much more efficient support than a heavy armoured car. At the same time the views of the General Staff as to the number of men required to man an armoured car have been modified. It is now agreed that three men—a driver, a gunner and a car commander—should be an adequate crew. As a result of this opinion, a light armoured car has been built. This is a three-man six-wheeled armoured car built on a Crossley chassis, which is a modified commercial chassis. The vehicle is thus altogether much cheaper

than the car mentioned above (Lanchester heavy). Putting aside the fact that it is cheaper, there are many points in favour of a light armoured car; for instance, it can cross bridges that would not bear heavier types; it carries enough petrol for about 200 miles.

"The armoured car is in a different position from almost any other fighting vehicle, in that only limited numbers could be employed. The essential characteristics of an armoured car are speed, silence and reliability. At the beginning of a war it is certain that armoured cars will be over-worked. But very shortly, as the forces begin to get into contact, there becomes less and less room in which to use such cars."

The Machine Gun Carrier

With the Mark VI Carden-Loyd machine gun carrier, the machine gun can be fired from the carrier or can be lifted out and fired from a suitable spot on the ground. The crew of four men is conveyed on a trailer and is unprotected. The vehicle itself is sufficiently armored to resist ordinary machine gun fire except from the air.

The Future

"We can only retain this position of superiority if we continue to experiment with these vehicles, and when we have decided to adopt a new type, we put numerous examples of that type into service so that those defects which can only be revealed under the 'iron hand of the soldier,' should be brought to light. This policy not only commends itself from the military point of view but from the financial point of view also, since every year we are saving money by finding better methods of preventing wear, better methods of maintaining vehicles, better methods of training personnel to handle the vehicles without doing them avoidable damage.

"The trend of present design is towards a tank that is very fast and exceedingly powerful, capable of traversing long distances without refuelling and endowed with what for the want of a better word I call great stamina. This tank is as different from the tank of the Great War as modern artillery is different from the muzzle loaders from which Napoleon and Wellington threw bits of iron at each other across the fields of Waterloo. That muzzle loading period was the end of an epoch—the epoch of beautiful uniforms and devastating inefficiency. The tank of 1918 saw the end of another epoch of war, the epoch of mud and blood. The tank of that day was a last desperate expedient to bolster up that bludgeon type of war, and indeed it only just won through, for on the 5th of November, 1918—the last occasion on which tanks were used—only eight machines were available.

"The modern tank introduces a new epoch. Like the rapier wielded by those heroes of our boyhood's storybooks, it can strike the enemy's body where we will and, as it were, in the twinkling of an eye."

Note: In the discussion following the lecture, the Chairman said: "If we have the misfortune to be engaged in another war, it is to my mind obvious that, for reasons of finance, we shall begin with a very limited number of fighting vehicles. * * * Consequently, these must be of as few types as possible and must be thoroughly reliable." He advises standardizing each machine as soon as it becomes really dependable.

Belgium

A German officer (Major A. D. von Hartlieb) wrote two or more years ago, "In Europe the value of cavalry is appreciated more as one moves from west to east. This is easy to explain. In the west the field of operations is restricted; the network of good roads is very complete; the space required by the cavalry for its deployment will be frequently lacking; and finally the network of roads frequently permits the accomplishment of cavalry missions by mechanically transported infantry." It is, perhaps, then, not surprising to find Belgian comment extremely enthusiastic about the possibilities of mechanization.

In an article in the *Bulletin Belge des Sciences Militaires*, February, 1931, entitled "Why is it Necessary to Motorize?" Général-Major Semet and Major B. E. M. Willems say:

"Three arguments imperatively demand this motorization:

1. The present impossibility of protecting the horse against toxic gases, vulnerability of teams.
2. The economy in the use of the internal combustion engine as compared with the horse-drawn tractor.
3. The rapid diminution in the number of horses that can be requisitioned."

* * * * * * * * *

The armies of the world should have accepted the coming of the internal combustion motor in the same way they have the bicycle, wireless telegraphy, etc. But the motorized vehicle—as a combat element—took its place in the army only after a long period of trials, of gropings, and this is easily understood. They break the homogeneity of action and the harmony of movement of the large units.

In the maneuvers of a neighboring country, where a large unit had the mission of testing motorized engines alongside mounted troops, cyclists, horse artillery, portée artillery, etc., in the critique on the maneuvers the thought was expressed that all these combat elements of different speeds spent their time mutually waiting for one another in order to participate as a whole in the combat. We cannot conclude, then, as to the necessity for motorizing without much study of the manner of coordinating this motorized force. Perhaps we shall be led to break deliberately with the large units of the old type and to create an exclusively motorized organism. The field seems open to a tactics inspired by Napoleon's cavalry.

Such studies and tests are far from being completely achieved, even in England. This should be a comfort to the armies which have not radically taken up motorization, but the alert observer will follow attentively the tests made in armies whose financial ceiling is higher than ours.

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The attack and defense of States will have to take

(Continued on Page 64)

Cloth Maps for Field Use

By Brigadier General W. C. Brown, U. S. A., Retired

ORDINARY paper maps are so unsatisfactory for field use that the writer, after unpleasant experiences with them in Indian campaigns, Spanish War, Philippine Insurrection and Mexican Punitive Expedition, sought, for this purpose, some years ago something more substantial than paper.

Inquiry developed the information that cloth maps were used in our service as far back as the Civil War, but the trouble and expense involved in supplying them were such that since then, save as appears below, they seem to have been practically unknown, and we have had to resort to the unsatisfactory method of cutting a map into squares and, by means of paste, mounting it upon cloth.

The usual alternative has been the Map Case, now a regular article in an officer's field equipment. This, however, adds just one more article to the officer's already long list of field impedimenta.

It is precisely this which we wish to avoid, for when worthwhile field service is being performed, it is just the time when transportation is very meagre and all too frequently entirely non-existent, as, to our sorrow, we have had occasion to frequently experience.

For our use in the Sioux Campaign of 1890-91 an enterprising Department Engineer Officer (Lieut. Haydn Cole) supplied a limited number of maps blue printed (white on blue) on finely meshed linen. This was so much of a novelty that it attracted considerable attention. We have since learned that linen is not essential; cotton which is less expensive answers perfectly.

Following our experience in Mexico we determined in future to have our field maps on cloth. The General Staff Map of northern Mexico of 1913 supplied to troops in 1916 was printed on tolerably good paper and fortunately for our purpose, fairly thin. We had no difficulty therefore in coating finely meshed cambric with the ordinary blue print solution and by means of a large home-made printing frame, very acceptable white on blue prints on cloth were made. We might state here that sized blue print cloth already prepared is a commercial article. If unsized fabric is desired it is easily prepared using a finely meshed cambric cloth.

A blue background, however, is open to the objection of being somewhat difficult to read, and is unsatisfactory where notes or additions have to be made on the surface of the map.

A step in advance, therefore, is to have a Van Dyke or reversed negative prepared from which excellent *blue line* prints can be made. The latter, however, involves recourse to a plant having the necessary expensive machinery for producing negatives.

All of the above was, for the benefit of officers desiring to make their own cloth copies, written up in detail and published in the U. S. CAVALRY JOURNAL for April, 1925.

For several years past the U. S. Engineer Map Reproduction Plant at Washington Barracks has been turning out excellent cloth maps in several colors.

Black on White Maps By "B W" Process

Recently our attention has been called to and we have been experimenting with the so-called "B W" (Black on White) Direct Printing Process which, although it has been on the market some two years, may not be familiar to many of the readers of this Journal. It seems to be the latest development of this art.

The following description contemplates reproduction by an amateur whose sole apparatus is a printing frame and sunlight, and where the matter to be copied is *black* and *on one side only* of the sheet.

The process is chiefly used in machines primarily designed for blue printing in quantity by electric light.

This is a marked step in advance of any Blue Print method, and moreover has the distinct merit that even in the field with no other apparatus than a printing frame copies can be made by an amateur of maps and various other kinds of written and printed matter, when, as stated above, the matter to be copied is on one side of the sheet and on fairly thin paper.

Its only objection (not a serious one however) is that the amateur cannot himself coat the material (paper or cloth) which must be bought already prepared. The B W Process material supplied either in the shape of paper or cloth comes already coated, the wholesale prices being approximately 15c per yard for paper, and 65c per yard for medium, and 90c per yard for thin cloth. Cost of developer 1c (or less) per square yard of surface treated.

The copies are made by *direct printing*, just as in ordinary Blue Printing, and as the results are black lines on a clear white background, no recourse to Van Dyke or reversed negatives is necessary.

Best of all, this obviates having to resort to the expensive photostat process which, to obtain the same result, requires two operations while the B W Direct Printing Process calls for but one—the *direct printing*. The time of exposure is essentially the same as required for rapid blue printing.

What we are here attempting to describe is the use which can be made of this process by the amateur—the young officer or soldier in the field, with no other facilities than a printing frame and sunlight.

In commercial establishments where such work is done in quantities, the B W Process is accomplished simply by securing a special attachment to the ordinary blue printing machine, the changing from blue

printing to B W Process being accomplished in a few minutes.

Making a negative from another negative. A specially prepared thin paper is used for this purpose and its use frequently saves much time and labor, as for example when it is discovered that changes should be made in an original negative (tracing).

When taken out of the printing frame the side which has been exposed to the sun should be immediately mopped over with the developing solution, usually done by dipping a wad of cotton in the developer and passing it back and forth across the exposed surface when the black lines appear as if by magic on the chemically coated surface which, under the exposure to light, changes from a pale yellowish tinge to white.

Manufacturers advise that the prepared paper or cloth (which must be kept in the *dark* in a cool dry place) will keep well for a month. However, in the cool dry climate of Colorado, we have had paper which has been on hand for six months and which is still good.

The developer comes in the form of two powders, and for use each is dissolved in lukewarm water as per directions. These call for the two solutions being mixed in equal quantities as required for use. Although we have been able to do fair work with developer mixed and kept in the dark for weeks, the results are by no means as satisfactory as those secured through *freshly mixed* developer.

The prepared paper or cloth evidently keeps good longer than mixed developer.

As the developer comes in shape of two powders; it is well adapted to military use in the field.

Experiment shows that there are many convenient uses to which either the B W Process, cloth or paper, can be put, such as:—

(a) Making copies of maps when printed on fairly thin paper.

(b) *Copying letters.* If typed, the typewriter ribbon must be *black*. If written with pen and ink, the ink must be *black*.

(c) Even better results are secured in copying any printed or written matter on tracing paper or tracing linen; where the matter is written, India Ink is preferable.

(d) Making a negative from another negative (see above).

(e) Copies of printer's proofs where made on onion skin paper or its equivalent are readily and inexpensively copied.

(f) Even fair copies of photographs can be made when the original is on *very thin* paper and the subject gives marked contrasts of light and shade.

EDITOR'S NOTE: Sample of maps on cloth prepared by the methods described in the above article by General Brown have been examined and the results are quite striking. Cloth prepared for the B.W. process may be obtained from the Charles Bruning Co., 96 Reade St., New York City; Branches in Chicago, Los Angeles, Newark, Boston, Detroit, Pittsburgh, Miami.

Remount Depot Horses

Their Sale to Officers and Selection for Schools

THERE have been some changes of policy in the Remount Service as regards issue and sale of government horses, due in part to congressional action which has reduced the number of authorized private mounts from two to one. It is believed that Cavalry officers will be interested in the following explanation of the Remount Service policy in this connection.

In June or July of each year, all four-year-old depot-raised animals, except those selected for breeding, are available for selection by representatives of the Cavalry and Field Artillery Schools and by the Remount Depot Commanders, who reserve a certain number for sale to officers. Selections of particularly well-bred horses will not be made for sale to officers, except upon special authority of the office of the Quartermaster General. An officer can purchase only one mount from the government and cannot do that, if he already has an authorized mount.

Remount Depot Commanders, after the annual selection has been made, are required to submit a list of horses which they are holding for sale to officers to the Quartermaster General, giving name, brand number, breeding, size, and rating of each animal. Approved applications of officers for the purchase of government animals are forwarded by the office of the Quartermaster General to Remount Depot Commanders, the date of approval in all cases determining the priority of an officer's application. Depot Commanders will indorse the officers' application blanks back to the Office of the Quartermaster General after selection and authority for sale have been approved, and the entire transaction (payment, etc.) must be consummated within thirty days of the approval of the sale. Army Regulations 605-140 define whether an application may be considered.

Any officer so desiring may delegate the selection of the horse he is about to purchase to the Depot Commander or another officer or, of course, he can make his own selection, if he can arrange to be present at the Remount Depot. However, if the officer does not go to the depot to select his horse for some time after his application has been approved and he still desires to make his selection personally, he will lose his right of priority between the date of approval and the date he goes to the depot to make the selection.

An officer may designate a special animal for selection by mail or otherwise and, if the animal is available and the officer is entitled to the animal by priority, his selection will be approved.

Events Overseas

By Lieut. Col. Herman Beukema, Professor, U. S. Military Academy

War Debts and Reparations

AMERICAN isolation is a thing of the past. It matters nothing whether the American public approves or disapproves. It matters little whether President Hoover's sudden bold stroke of policy in offering generous relief to a debt-burdened world results in complete success or compromise. The fact of his offer, coupled in logical sequence with the presence in 1918 of two million American soldiers in northern France, there to defend American rights, registers inescapably the fact that the dominant economic nation in this world cannot safely stand aside while her friends (and rivals) are slipping into ruin. "It is 1917 repeated," announced one speaker before the British House of Commons on the day following the Hoover offer, asserting further that every international crisis henceforward will find the United States playing its part to the full. In short, the futility of pigeon-holing Europe's news as something detached from American affairs, must be apparent to all.

The picture is clear if we examine briefly the facts which swept to the crisis in late June. Since the inception of the Dawes Plan, it has been evident that national prosperity alone would put Germany in a position to meet the obligations which she had accepted under that instrument. But a world submerged in a depression of unprecedented severity and duration left no room for German solvency, let alone prosperity. To make matters worse, the Right Wing (Nationalists and Hitlerites) and Left Wing (Communists) enemies of the Bruening Government were not at all averse to inviting national disaster if by that means they might secure power.

In May it became apparent that the crisis was at hand. Taxes had been moved up by stages to a limit where a further rise would only have throttled industry and commerce; expenses had been cut until a coalition government would go no further, and yet the national budget failed to balance. Two doors were still open—each leading to disaster. Would Breuning invoke Germany's right to a moratorium on reparations under the Young Plan? It would mean temporary surcease, but only at the almost certain cost of destroying Germany's international credit. And should she thus lose her standing among the capitalistic Great Powers, it would require but a slight slip further to plunge her into Communism. A second way out involved the calling of Hitler's Nazis to power, with their program of repudiation, and the ultimate consequence of turning Germany into the battleground of a new Continental War. There was a third door, but it could be opened only from the outside. If Germany's creditors could be made to see the consequences to themselves of a German breakup, perhaps foreign help might be forthcoming on such terms as would leave German integrity and sovereignty unimpaired

At the invitation of Premier MacDonald, Chancellor Breuning and Foreign Minister Curtius went to Chequers June 6, to lay their case before the British. In the meanwhile, our own government had for months past kept a close eye on the situation; and June found Secretary of the Treasury Mellon in England and France, checking the facts which had been gathered. Even as the parleys progressed, a "flight from the mark" was under way. In a single month the Reichsbank lost $240,000,000 in gold and foreign currency, as foreign financiers withdrew their short term credits and German citizens rushed their movable wealth across the frontier. In sympathy with the situation, commodity and security values on every market in the world were dropping at an accelerated pace.

The situation was at its worst when President Hoover, on June 20, threw wide the door for international cooperation toward German restoration. His proposal, the opening paragraph of which is quoted below, leaves no room for quibble or evasion:

> "The American Government proposes the postponement during one year of all payments on intergovernmental debts, reparations and relief debts, both principal and interest, of course not including obligations of Governments held by private parties. Subject to confirmation by Congress, the American Government will postpone all payments upon the debts of foreign Governments to the American Government payable during the fiscal year beginning July 1 next, conditional on a like postponement for one year of all payments on intergovernmental debts owing the important creditor Powers."

Reduced to dollars and cents, we find that acceptance in full by all the Powers involved would relieve the German treasury of an outgo totalling about $400,000,000 during the fiscal year 1931-32, the bulk of its reparations payments. The United States in turn, would lose an income on war debts accounts amounting to $246,566,806. Next to us, France would make the heaviest immediate sacrifice, in that she would forego a net balance of $96,756,840 due under her normal operations in reparations and war debts.

How far was the President's action necessary? We may look to the reaction in the legislative and executive chambers of the Great Powers, to the press, and finally to the world's markets for an answer. In Britain, Laborite, Liberal and Conservative responded with immediate and unqualified approval; in Germany a tottering coalition cabinet regained its seat in the saddle; Italy forgot its domestic political troubles long enough to shout enthusiastic indorsement; Japan

gravely acquiesced. If possible, the press outdid the statesmen in their enthusiasm. Nor was this reaction limited to the countries immediately concerned. In both hemispheres the Hoover offer was hailed as "the dynamite to break the crust of despair which is slowly choking us all," to quote a Swiss editor. The action of the world's markets leaves an even clearer record. So far had confidence in the future forsaken both buyer and seller since the turn of the year that quoted prices were no longer a measure of values—but rather a barometer of hopelessness.

Since the inception of the Dawes Plan in 1929, the average prices of wholesale commodities had fallen by more than a third. The rebound from that bottom was instantaneous, as the cables flashed the news. A broad, vigorous rise followed, suffering no interruption till France began to interpose difficulties to the execution of the plan. In brief, the world was beginning to regain a measure of its lost confidence.

Discordant notes are not lacking in the chorus raised by the President's proposal. France threatened for a fortnight to be a stumbling block. Unfavorable action on her part would probably have given the cue for a similar course on the part of the Little Entente and Poland. The storm in the French Parliament, heightened as always by internal political considerations, brought the usual bitter denunciations of the United States. But for once in a decade the cry of "Shylock" was not hurled at us. Through it all, the opposition in both chambers realized that France must inevitably keep step with the world in this crisis. Otherwise—isolation. At this moment the prolonged negotiations between the representatives of the United States and France seem to have found a middle ground for compromise. In substance, Germany will have her respite. By means of a bookkeeping transaction she will transfer to the Bank for International Settlements, the French share of unconditional payments. That sum is then to be placed to the credit of the Reichsbank and will revert through that intermediary to the German government. Moreover, Germany is given a reasonable period of years in which to make good the 1931-32 payments. The arrangements keep intact the machinery of the Young Plan. Acceptance of the accord, however, still awaits the action of the French Parliament, and of the American Congress.

The German extremist press, both Right and Left, are one with the mouthpieces of Soviet Russia in their vicious attacks on the scheme. Cheated of an issue, they denounce it as an effort of Wall Street to help the speculator. Speaking more soberly, the Soviet-controlled press declares partial fulfillment of its earlier prediction that the capitalistic world would at last pool resources to meet the economic attack of Russia, and that it is now but a short step to the point, where the issue will be joined on the battlefield.

In the final analysis, America's presence as prime mover in the reparation question indicates no reversal of policy. At most it is a change in trend. The American merchant and the American investment dollar have long since made impossible the isolation desired by an influential minority of our citizens. The President's action does no more than openly register the fact that the political and economic well-being of the world is at all times a first concern of the American people.

Disarmament

In the seven weeks preceding President Hoover's debt proposal, the disarmament issue received setbacks so severe that its backers were all but ready to postpone indefinitely the February (1932) Arms Conference, as more apt to lead to war than to prevent it. The "storm over Europe" grew imminent as German bankruptcy apparently became a matter of days. An even greater threat loomed with the realization that Russia's feverish efforts were building a sound industrial foundation for the world's largest military machine. The Continent did not blink the bald facts placed before it by President Hoover in his address to the International Chamber of Commerce. The individual countries simply could see no way of dropping their share of the arms incubus without imperilling their individual safety. Ready to admit the existence of standing armies totalling 5,500,000 men,—70% higher than in 1913, maintained at a cost of five billions of dollars a year, they were yet unwilling to accept the Kellogg Pact as a substitute safeguard.

Germany's announced intention of rearming, in view of the failure of the World War allies to live up to their "disarmament obligations" under the Treaty of Versailles found direct expression at Breslau. There Stahlhelm, German war veterans' organization, assembled for its annual convention. At a given signal the army, 150,000 strong, faced east toward the Polish frontier, a bare thirty miles distant, and voiced its oath to "redeem" the lost territory. Meanwhile, the Franco-Italian naval negotiations remained wedged in the impassé created when the Italians discovered the French replacement joker. A conference in London did no more than keep the door open for further negotiations. The problem has now been passed to the representatives of the three Powers concerned at Geneva. In brief, France insists on getting her rebuilding program under way in mid-1935, 18 months before the expiration of the London Naval Treaty. Under her projected schedule she would attain a superiority over Italy in new ships totalling 225,000 tons before the end of 1936, as compared with a present margin of 170,000 tons. Great Britain has aligned herself with Italy in the rejection of the French plan.

Another difficulty arises from the British realization of the peculiar vulnerability of London to a gas attack from the air. The scaling down of normal national armaments fails to reach this problem. As one government speaker declared before the House of Commons, "any nation with a developed chemical industry has high war potential." In consequence we may look for British insistence that lethal gas be eliminated from war, whatever her expectations as to the good faith of nations in adhering to the principle when faced with the fact of war.

Finally, none of the former Allies feel that the Zollverein-Anschluss-Mittel Europa issue is shelved, in

spite of the efforts towards its entombment in the World Court and the League.

With so many fears and ambitions separating the European peoples, cooperation toward the elimination of armaments was rapidly becoming impossible in the opinion of most European statesmen. The appointment of Arthur Henderson, British Secretary of State for Foreign Affairs, as president of the coming Conference made it clear that all possible channels of conciliation would still be explored. But hopes of success were close to zero. At that juncture, President Hoover's action, calling for international cooperation in matters economic, cleared the atmosphere. Premier MacDonald followed with what is described as the greatest speech of his career, delivered before the House of Commons June 29. In substance, it is a powerful plea to all the Great Powers. He indulged in neither optimism nor pessimism. In particular, he extended the olive branch to France, a necessary gesture in view of that country's growing bitterness over the recent Anglo-German rapprochement. The prospects for the calling of the February conference are linked to the outcome of the postponement in debt payments. The larger question of a successful conference remains an open question.

World Wheat Conference

How to restore the production of bread grains to a profitable basis was the problem confronting the representatives of the great wheat-growing countries in a brief (and abortive) conference at London, May 18. The problem appears in part from the following table (1930 statistics):

Production		*Exports*	
Russia	1,032	Canada	186
U. S. A.	851	Argentina	151
Canada	398	U. S. A.	140
India	387	Australia	63
Argentina	239	Russia	93
"Little Five"	334*	India	3
Australia	205		
Totals	3,446	Totals	636

* Poland, Hungary, Jugoslavia, Bulgaria and Rumania. 1930 export figures for the "Little Five" are not yet available.

Add to the above the fact that the hungry Chinese, to mention one group in the hundreds of millions of underfed, cannot afford to buy wheat even if the price drops to 25c the bushel, and it appears that no profitable market can be created for the estimated 1931 North American surplus of more than a billion bushels. Acreage reduction was proposed by Samuel R. McKelvie, chief delegate of the United States Federal Farm Board, Russia countered with export quotas, blandly adding that they must be based on 1913 export figures. His object is clear when we realize that:

1. 1913 was the year of an abnormal bumper Russian crop, greatly exceeding all other figures except those of 1930.

2. The United States, Canada, and the Argentine developed their great export wheat markets during Russia's enforced absence from 1914-1929.

"What is dumping?" blandly asked the Russian delegate when the subject arose, knowing that neither a Russian nor anyone else can reduce production cost data for his country to terms of currency. Eventually, a few meaningless resolutions were adopted, a few committees were assigned mission even more meaningless, and the law of supply and demand was left to work out its ultimate surgery.

The British Empire

United Kingdom. Labor paused long enough in its efforts toward a solution of Europe's problems to serve notice on the House of Lords that that body's days are numbered. The Prime Minister reflected Labor's attitude in his words "It (the House of Lords) acts as may a subordinate or subcommittee of Tory Headquarters." He went on to threaten the Upper House with the creation of a sufficient number of new peers to ensure the passage of Labor legislation.

The particular issue developed from the efforts of Mr. Snowden, Chancellor of the Exchequer, to ensure a balanced budget for the new fiscal year. To that end he had proposed his Land Agricultural Utilization Bill, involving a levy of one-half of one per cent on the capital value of land. By a technical maneuver he sought to introduce it as a Finance Bill, therefore not subject to veto by the Lords. Here was a direct drive on the aristocratic land-holding class, "pure socialism unmasked" as one Conservative put it. Both wings of Labor united in support of the measure, in spite of the objections of the Left Wingers that it was not drastic enough. The Conservatives were equally united in opposition, leaving it to the Liberals to use their balance of power in deciding the outcome. To date, Lloyd George had gotten little from his alliance with Labor beyond hope and small comfort. And now to challenge the British land-holder seemed a sure road to the extinction of his party. Eventually, he offered Liberal support for the measure, but only on the adoption of certain emasculatory amendments. The whole preposterous business appears to be vanishing into thin air,—a case of political futility at its worst.

With the army of unemployed holding stubbornly at a 2½ million level, all parties show deep concern over the interim report of a special committee on the dole problem. By reducing the individual allowance in proportion to the drop in the cost of living, and by increasing the payment quotas of employer, employee, and government, it is hoped to restore the pre-war actuarial basis of the unemployment fund. The attainment of that goal depends finally on a substantial reduction in the average unemployment figures. However, even if they should remain at the present level, it is estimated that the annual deficit in that fund would be cut by eighty per cent. Labor, losing steadily in the by-elections, hesitates to support the measure, particularly with its Left Wing radicals ready to leave the reservation on the issue.

The Beaverbrook press has been making merry in the typical Beaverbrook manner with a sensational attack on the League of Nations, denouncing it as a

mere tool of France. From mid-May on, the campaign raged until its very monotony forced a subsidence. If Beaverbrook is to be believed, Downing Street has shown such deference to the army ascendancy of the French system, that she is losing her sovereignty, is no longer the mistress of her own destiny. The French press replied in kind, with the ultimate result that the strain produced in Anglo-French relations by the Anglo-German rapprochment and the British part in the Franco-Italian negotiations has grown more acute. Such embarrassments in the exchanges across the Channel are more or less chronic. The real mischief occurs in the drag they have placed on the government's efforts to prevent Russo-German collaboration —or something more dangerous than collaboration.

In the military sphere there are few developments of importance aside from the stand taken on the use of lethal gas in war, referred to above. Experiments with mechanization continue so far as the budget permits. The attempt to mechanize the Cavalry leaves the horse still in the picture. So long as the use of that arm must envisage the conditions faced by Allenby in Palestine, gasoline will not replace oats. In the meanwhile, the fire power of Cavalry has undergone great development in the reorganization which began in 1928. Armored car protection is afforded to safeguard fully the mobility of the Cavalry units, and to prevent surprise attacks by delaying bodies. Another conclusion of importance appears in the finding that no mechanized unit can hold ground, mop up, or take cover from artillery, with the result that infantry as such still plays its leading rôle in British war plans.

The Dominions. Do we read retaliation and reprisal for the Smoot-Hawley tariff in the recently announced increases in the Canadian tariff? Premier Bennett says no, declaring that his ministry (dominantly Conservative) is merely following its normal policy of furthering the Dominion's best interests without regard to the action of foreign powers. Whatever the object, there can be no doubt of the effects on American exports. Some 200 items are affected, involving Canadian imports totalling $200,000,000. The heaviest blow falls on our coal mines, which face the loss of exports to the value of $52,000,000. To put teeth into the measure the Ministry seeks authority for an Order-in-Council which can effectively meet foreign retaliation and dumping by the imposition of further surtaxes as they appear necessary. The American manufacturer, hard hit by many features of the measure, is nimbly jumping the wall by erecting branch factories in Canada. Arrangements for no less than 74 such were completed within a few weeks after the tariff announcement.

The financial difficulties of Newfoundland, unable to float an $8,000,000 loan, led in May to a widely accepted report that Labrador was for sale. Premier Sir Richard Squires put an end to the flurry by announcing on May 25 that "Labrador is a portion of the sovereignty of his Majesty the King, and under no circumstances would any negotiations be undertaken contemplating a change of flag, nationality, or allegiance." A further report that Newfoundland was ready to abandon its Dominion status and seek cover under Canada's protecting wing was scouted June 4 by a denial in both capitals.

The hope of resuming the fruitless efforts of the London Imperial Conference of last fall toward reaching a workable trade agreement for the Empire is gone for the time being. Canada, prime mover for such a gathering in Ottawa this summer gave up when New Zealand slammed the door in her face. The latter incensed over Canada's action in shutting out New Zealand's farm products with her new tariff wall, replied with abrogation of their joint trade agreement. It is a poor augury for imperial trade relations in the near future.

The Australian "Navy," a substantial flotilla not long since, has now sunk to two cruisers, a small aeroplane carrier, and one flotilla leader. The bulk of the fleet has been laid up in reserve or presented to the British Navy, as the government cut expenses to the bone. Reorganization of the land forces on a voluntary basis tells a similar story. A small, highly trained permanent nucleus will be maintained for peace administration, and the training of territorials and cadets.

In the nine months ending March 31, the seven Australian governments had registered a deficit of £132,000,000. A further repudiation by New South Wales at the direction of its radical Premier Lang, threw a further load on the Commonwealth. A glimmer of hope appears in the fact that the 1930 wheat crop is all but sold, even though the price has been ruinous.

How utterly divided Australia has become on the subject of its difficulties appears in the formation during the past few months of no less than a dozen organizations, with announced objectives varying all the way from revolution and Communism to military support of the present government. So fraught with danger is the situation that the United States Consulate has seen fit to inform residents of American citizenship that it looks with disfavor on their joining any organization whose objectives might result in the use of arms.

The House of Assembly of the South African Union witnessed a heated scene in connection with a recent debate on the use of native troops for the defense of the country. The Premier closed the debate by calling attention to the fact that any native prisoner caught with arms under the British flag during the Boer war was summarily shot. Of greater importance is the rapid development of the Cairo-Cape Air Route. Twenty-seven main and thirty intermediate stations already mark the course. Radio communications are ample throughout, hotel facilities are being provided, and costs to Central African points have been cut below those of the surface routes from London.

NATIONAL GUARD NOTES

Chief of the Militia Bureau's Rifle Team Match

THE Chief of the Militia Bureau's Indoor Rifle Team Match for 1931 was won by the team of Company G, 163d Infantry, Montana National Guard, with a score of 3,726 points. The company is stationed at Glasgow, Montana, and commanded by Captain Carl E. Hammerness. The members of this excellent shooting team are:

Corporal Frederick H. Weber
Sergeant Warren R. Gamas
1st Lt. Arthur O. Stensland
Sergeant David K. Boyd
2nd Lt. John L. Hoffman
Sergeant Orville S. Stomsvik
Pvt. 1cl. Chester E. Anderson
Pvt. 1cl. Clinton Stomsvik
Sergeant Frank O. Schuster
Sergeant Charles M. Hoffman

The runner-up team was that of Company G, 168th Infantry, Iowa National Guard, commanded by Captain Cuthbert F. Sandstrom.

Thirty-four teams representing the same number of States participated in this nation-wide rifle marksmanship event. The scores were:

1.	Company G, 163rd Infantry, Montana	3726
2.	Company G, 168th Infantry, Iowa,	3680
3.	Company F, 122d Infantry, Georgia	3596
4.	161st Motor Transport Company Washington	3592
5.	Company A, 298th Infatry, Hawaii	3587
6.	Company C, 153d Infantry, Arkansas	3581
7.	Company L, 143d Infantry, Texas	3543
8.	Company E, 121st Engineers, Washington, D. C.	3524
9.	Company D, 120th Engineers, New Mexico	3499
10.	Company H, 185th Infantry, California	3492
11.	107th Ordnance Company, Michigan	3453
12.	Company I, 129th Infantry, Illinois	3442
13.	Company C, 150th Infantry, West Virginia	3441
14.	Company I, 185th Infantry, Minnesota	3439
15.	Company B, 186th Infantry, Oregon	3422
16.	Troop I, 115th Cavalry, Wyoming	3401
17.	Company B, 158th Infantry, Louisiana	3398
18.	Company B, 140th Infantry, Missouri	3394
19.	Company F, 124th Infantry, Florida	3363
20.	Company K, 152d Infantry, Indiana	3351
21.	Company A, 127th Engineer Bn., Alabama	3341
22.	Company E, 116th Engineers, Idaho	3336
23.	Company C, 102d Infantry, Conn.	3327
24.	Company I, 101st Infantry, Mass.	3325
25.	Company F, 1st Infantry, Maryland	3308
26.	Company K, 164th Infantry, North Dakota	3248
27.	Company E, 180th Infantry, Oklahoma	3245
28.	Hq. Co., 158th Infantry, Arizona	3227
29.	Company B, 120th Infantry, North Carolina	3213
30.	Company I, 113th Infantry, New Jersey	3176
31.	Hq. Co., 3d Bn., 112th Infantry, Pennsylvania	3144
32.	Company I, 127th Infantry, Wisconsin	3102
33.	Company F, 157th Infantry, Colorado	3038
34.	Company D, 118th Engineers, Rhode Island	2711

The national championship team will be awarded the trophy provided for this event and each member will be awarded a silver medal. Each member of a state championship team will be awarded a bronze medal.

This match was founded by Major General William G. Everson and it was fired for the first time this year. Its object is to provide a form of rifle marksmanship training which can be carried on at home

The Chief of the Militia Bureau's Trophy.

stations of units and in which the principles of the subject may be taught and demonstrated. There has been much enthusiasm over it. It is contemplated that next year every State will have a team to represent it. That all are not represented this year is due to the fact that a number of the States had already made arrangements for their small-bore competitions and could not make a change in their plans.

Every unit in the National Guard whose principal weapon is the rifle is eligible to compete in the match. Regiments and separate battalions conduct preliminary shoots to determine the composition of the team to represent them in the state competition. The teams thus selected compete among themselves in each State when the match is fired on official targets supplied by the Militia Bureau. The winner of the match in each State is certified to the Chief of the Militia Bureau

and the targets made are forwarded. The high team of all these is the national champion, and the others are state champions.

The handsome trophy goes to the national champion to be held for a year or until the succeeding year's match has been fired and another winner determined.

The Medal Awarded to the Members of Teams Who Won the Chief of the Militia Bureau's Indoor Rifle Team Match.

All targets forwarded to the Militia Bureau are checked and marked by the experts in the office of the Director of Civilian Marksmanship in Washington, and the awards are made on their findings.

The course consists of 10 shots prone; 10 shots sitting; 10 shots kneeling and 10 shots standing on the N. R. A. official 50-foot gallery target, at a range of 50 feet from the front edge of the firing point to the target. Complete regulations that prescribe the conduct of the competition are issued by the Chief of the Militia Bureau.

Camp Inspections

TO be forewarned is to be forearmed. This paragraph tells you some of the things that the inspector looks for during the field training camps of the National Guard.

He is out and around camp before reveille noting whether the ventilator hoods at the tops of the pyramidal tents are opened.

He is looking for the man who goes down to the latrine before reveille and on his way back awakens most of the company. Men who want to sleep until first call are entitled to that privilege.

The inspector watches the formation for reveille. He notes how many men scramble into ranks after assembly has sounded. He watches for orderliness and precision, every man in his place, in proper uniform, and at attention at the command "Fall In;" every man answering "Here" to his name at roll call in a proper tone of voice—no yelling it out; steadiness in ranks—no slouching, moving about, bringing hands up to the face, or anything to mar the formation; how the first sergeant reports the company to the officer who is superintending the formation and how he in turn reports it to the officer of the day; how the company is dismissed and enters upon the activities of the day. A company shows its real character by the way in which it does these things.

After reveille the inspector visits a number of the kitchens to see how the morning meal is being prepared. He observes the serving of breakfast at some of the dining rooms.

At about nine o'clock he makes another round. First come the latrines and bath houses. These must have constant sanitary care. He notes whether or not the seats have been scrubbed, the urinals oiled, the night can emptied and scrubbed and placed so that the sunshine can get into it, bath houses policed, leaky plumbing repaired, and hot water heaters working so there will be a supply of hot water when the men return from their morning's field exercises.

Next comes a trip through the tent area and an examination of the tents and company streets. He notes whether or not everything is policed up and orderly; the tents rolled up and neatly furled when so ordered.

At the company kitchens and mess halls he examines the cleanliness of the whole establishment. When he enters he expects the first man who sees him to call "Attention" in a voice loud enough to be heard by all the men in the vicinity. Failure to do this little act of military courtesy is bound to be noticed. He looks into the cleanliness of the ice box and its contents. A whiff of a disagreeable odor will lead to a further investigation. He notes the presence of flies, and he will not stop until he finds what attracts them. He sees the condition of the floor. Most cooks and kitchen police use entirely too much water on the floors. He looks over the stove, the kitchen utensils and all other tools in the kitchen. He examines the food storeroom for cleanliness and order. He asks for the menus and inquires into the details of handling the rations. Organizations that make proper use of the ration have no trouble in getting along with the allowance provided by the Militia Bureau; those that go about it in a haphazard manner, and with little or no system, have trouble in making ends meet.

Out in the mess hall orderliness and cleanliness are the things that strike the inspector. It takes only a short time to police up after breakfast if it is gone about in a systematic manner—every man having his job and getting about it. Lost motion and wasted effort are the things that will prevent its accomplishment on time. Then too, some kitchen police make about as much muss as they clean up. Consequently they make no headway. The secret lies in teaching them to clean as they go, to be careful and not slop water

all over the place and they will be able to accomplish twice as much in half the time.

The considerate camp inspector does not continue his inspections after the men return to camp from their forenoon's work in the field. Then their tents are their castles and they should be free to live in them in a comfortable way.

At retreat the inspector is out again to see how the formation is handled and he will note things much as he does at reveille. After dark he may make a round of the camp to see if everything is moving along in an orderly manner.

The company that wins the honor flag for excellence at these daily inspections is the one that is organized to do the policing with order and speed but without lost motion. It is the company that is trained, that pays attention to details.

Recruits at Training Camps

COLONEL E. J. STACKPOLE who commands the 104th Cavalry, Pennsylvania National Guard, has taken definite steps to eliminate recruits from his outfit at the field training camp this summer. This is in accord with a letter sent out to the States from the Militia Bureau on the subject.

A survey of the camp attendance last year showed that there was an average of nearly 16% recruits with organizations throughout the National Guard. In some States it ran over 20%. As a consequence, it was necessary to maintain a recruit training detachment which took officers and noncommissioned officers away from their field training in order to conduct the basic training of recruits.

In a General Order Colonel Stackpole announces that there will be no recruit detachment in his regiment during the 1931 encampment at Mount Gretna. In order to effect such a policy all original enlistments were discontinued on May 1st. A survey of all troops was made prior to that date, and men whose enlistments were to expire before the end of the field training period were discharged to make room for new men who would be able to get in at least 12 armory training periods before going to camp. Of course, those in the above category who desired to reenlist were given the opportunity and urged to do so. By carrying out this plan over a period of three years Colonel Stackpole will have no men whose enlistments expire during the period of the camp or the period of intensive armory training in preparation for that tour of service.

The Adjutant General of Pennsylvania has authorized the experiment initiated by Colonel Stackpole and the results will be watched very carefully. If it proves to be a success it will doubtless be adopted in other organizations of the National Guard.

In his communication to the States on the matter the Chief of the Militia Bureau placed no limitations. He merely suggested that the subject of elimination of recruits be given consideration and left it to the several State authorities to meet the situation in accordance with the needs of local conditions.

Volunteer Attendance at Army Service Schools

IN their enthusiasm to attend the National Guard courses at the Army Service Schools officers and enlisted men occasionally volunteer to attend at their own expense and without pay and allowances from the Federal Government. This whole proposition has been given most careful consideration by the Chief of the Militia Bureau as to its practicability and its legality, and it has been decided that approval of such a course cannot be approved. It looks like a very simple proposition but there are many angles that introduce a multitude of complications and the policy of authorizing only those who are regularly detailed to take the course must be followed.

Damage Claims Incident to Field Training

AN idea prevails in many sections of the country to the effect that the Federal Government may be held liable for damages to persons or private property resulting from accidents incident to the field training of the National Guard. Such is not the case.

The Comptroller General of the United States has consistently held that the National Guard, except when actually called or drafted into the service of the United States, is not a part of the Army of the United States and the Federal Government cannot be held liable for damages incurred by the National Guard or any member of that organization. No funds to pay such claims are in the budget of the National Guard.

In view of the fact that the National Guard are State troops, except when called or drafted into service of the United States, any damage sustained is a matter for the state authorities to adjudicate.

Loss of Hired Animals

MANY animals are hired for the use of the National Guard during the field training period. Occasionally one of them is injured to such an extent that he must be destroyed and a claim is made for reimbursement by the owner.

The procedure to be followed in such a case is covered in National Guard Regulations No. 60, paragraph 6. In this connection reimbursement from Federal funds can be made only in those cases in which it appears that ordinary care was not exercised while the animal was being used by the National Guard and for the purpose for which it was hired.

It is consequently inconsistent for a board of officers to state in their proceedings that the death of the animal was due to no fault of the National Guard and then recommend that reimbursement be made.

In the hiring of animals it would be well for contracting officers to have owners understand the provisions of paragraph 6 of the regulations referred to here. It would do away with many vexatious questions regarding the responsibility for losses of hired animals.

CURRENT TOPICS

A Correction

IN the article entitled "Some Experiences and Impressions—Santiago Campaign" by Brigadier General S. D. Rockenbach, U. S. A., March-April, 1931, issue of the CAVALRY JOURNAL, page 38, 14th line from the bottom of the left-hand column, "commanded by Colonel Charles Dick" should read "commanded by Colonel Curtis V. Hard."

The Retiring Secretary-Treasurer-Editor

ON June 15, 1931, Major Oliver L. Haines, Cavalry, was relieved from his duties as Secretary-Treasurer of the Cavalry Association and Editor of the

CAVALRY JOURNAL, and will become a student at the Command and General Staff School in September.

For three years Major Haines has carefully and successfully guided the affairs of the Association through a period of general financial depression and unfavorable legislation. His efforts have been directed towards the maintenance of a high standard for the JOURNAL and towards the publication of material of professional value.

To Major Haines are extended the thanks of the Association and best wishes for his continued success.

The Cavalry Rifle Team

THE Annual caliber .30 matches of the United States Cavalry were fired on the Camp Perry Range during the week ending June 27th 1931. The results of these matches were highly satisfactory to Lieutenant George A. Rehm, Cavalry, the Cavalry Team Captain, who stated that the prospects for the Cavalry in this year's team competition were favorable.

The Individual Rapid Fire Match consisting of the rapid fire stage of the National Match Course was fired June 22, 1931, The winner, Lieutenant R. D. Palmer, bested Sergeant Yerzserski by having the greater score at 300 yards. Both men had a total score of 96. First place received a silver medal, second place received a bronze medal.

The Off-Hand Match, consisting of 20 rounds fired at 200 yards, was won by Sergeant Wilzewski, with a score of 93. Sergeant Jensen placed second with a score of 92. First place received a silver medal, second place a bronze medal.

Sergeant Jensen and First Sergeant W. P. Jackson, of the Seventh Cavalry won the Regimental Team Match with a score of 564 fired over the National Match course. They received a handsome silver cup and bronze medals.

The Fort Bliss Trophy Match, consisting of 20 shots fired at 1000 yards was won by Sergeant Wilzewski with a score of 99. Staff Sergeant Hedglin placed second with a score of 95. The winner of this match received a silver cup and medal; second place received a bronze medal.

The Cavalry Individual Trophy Match of once over the National Match Course was won by Staff Sergeant Ehardt with a score of 286. Staff Sergeant Hedglin placed second and Corporal Wilson third, both men with a score of 277. First place received a silver cup and a gold medal. Second and third places received a silver and bronze medal respectively.

The Holbrook Trophy consisting of a silver cup and a gold medal was awarded to Corporal Kellerman, 12th Cavalry, for firing the highest total score five times over the National Match Course. His score was 1390. Staff Sergeant Ehardt won second place and a silver medal with a score of 1389. Staff Sergeant Hedglin won third place and a bronze medal with a 1377.

All medals were donated by the United States Cavalry Association.

Professional Notes and Discussion

The Origin of the Hussars[1]

By Alexander L. P. Johnson, Major, Infantry.

THE term "Hussar," in one form or another, is the common designation of light cavalry organizations in the armies of most nations. Wherever there are Hussars, they are distinguished by their brilliant, heavily braided uniforms of which the dolman and busby are generally conspicuous features. The Hussars' chief claim to distinction, however, rests upon the well-founded boast that they are the traditional *beaux sabreurs* and horsemen *par excellence*. Indeed, the term "Hussar" conveys the idea of an intrepid, dashing, daring Cavalryman.

Strangely enough, wide as is the acceptance of the term "Hussar," its origin is not generally known. Webster, for example, traces it to the Hungarian "huszár," which he defined as meaning originally "freebooter," and which was derived through the Slavic "gusar," "husar," "kursar" from the low Latin "cursarius" or the corresponding Italian form. Others sought to connect the term "Hussar" with the Turkish word "corsar" having a similar meaning. Still others attempted to trace it to the Latin "cursor," which signifies something that moves very rapidly. None of these derivations and interpretations are correct.

The term "Hussar" is indeed a derivative from the Hungarian "huszár," as Webster rightly held. This eminent authority erred, however, in his interpretation of its original meaning, as well as in his attempt to trace its origin to Slavic and Latin sources. The word "huszár" never signified "freebooter," although the characteristic foraging expeditions and raids of the early Hussars, which brought terror to various parts of Europe, have amply earned for them such appellation. The origin of the term "Hussar" or "huszár" is purely Magyar. King Mathias Corvinus of Hungary (1458-1490) decreed that, in time of war, every twenty peasant homesteads would furnish one light trooper. These troopers he organized into light cavalry squadrons, in contrast with the heavy cavalry units maintained by the royal exchequer. In the Hungarian language "husz" (hoose) means "twenty." The ending "ár" is, in the Hungarian language a noun-forming prefix, hence the word "huszár" really denotes "one derived from twenty."

Although light cavalry was a typical Hungarian formation whose existence is traceable to the very beginning of recorded Magyar history, the term "huszár" was applied to these organizations only after the middle of the Fifteenth Century, while in other European countries the term "Hussar" did not gain currency until the Eighteenth Century. France, as a matter of fact, was the first country outside of Hungary to organize Hussar regiments. This took place during the first half of the Eighteenth Century, when, as a result of the collapse of the Hungarian wars for independence, large numbers of Magyars sought refuge in France and elsewhere. The original French Hussar regiments were actually recruited among these Hungarian refugees.

Frederick the Great, after the raid on Berlin by the Nadasdy Hussars of Maria Theresa's army, induced large numbers of Magyar troopers and officers to enter the Prussian service. Several Hussar regiments came into existence as a result of these efforts, and one of them continued in existence to the conclusion of the World War. Although the Prussian Hussar regiments have long ago ceased to be Magyar in personnel, regimental tradition required that the regimental commander should have some knowledge of the Magyar language.

Wherever Hussar regiments were organized, their uniform generally followed the traditional Hungarian pattern. With the adoption of this uniform and accoutrement, the Magyar nomenclature also found its way into practically every European language. Thus we have in English the term "dolman" from "dolmány," "shako" from "csákó" "soutache" from "sujtás," and "sabre" from "szablya."

It is interesting that the Hungarian peasant uses the word "huszár" indiscriminately to designate any kind of a cavalryman, while he differentiates the various types of cavalry by prefixing the term "dragoon-huszár" and "ulan-huszár." He refers to the cavalryman of any nation who wears the Hungarian pattern of braided uniform as a "Magyar huszár" without apparently feeling any sense of incongruity in speaking about a German, French or Russian "Magyar Hussar."

[1] Based upon an article in the "Hungarian Military Review," March, 1931

Conservation of Forage

WASTE of forage and the consequent loss of condition of the animals, as well as unnecessary expenditure, can be avoided by particular attention to the following factors:

Supervision. The feeding and care of animals must not be a purely routine matter. Of course, a certain amount of routine is necessary and desirable, but this routine must be carefully planned and executed. The feed of each horse should be prescribed individually by the troop commander. In general, there is a tendency towards over-feeding of grain and under-feeding of hay. Lack of sufficient water and salt is inexcusable.

Oats. The galvanized iron feed box now in general use throughout the service may become a prolific source

of waste. The size and shape of this box necessitate what is known as "deep feeding" with the result that many greedy horses, through a motion of their heads, throw out a large amount of the feed from the box. Furthermore, these animals grab deep in the feed and gather more oats than they can possibly masticate. While attempting to masticate oats the animal carries his head out from the feed box and showers the oats all over the ground. Also, many oats are taken into the horse's stomach before being properly masticated. Had this same feed been placed in a box of the proper proportions, the horse would have been forced to gather his feed slowly and in small amounts and would have masticated it as he gathered it.

In many cases mangers can be modified so as to do away with the feed pan. The Field Artillery School has some stables in which the lower part of the manger is boarded up tight. The oats and hay together are placed in the manger, *effectively* preventing the animal from eating his grain too rapidly. The mangers are made continuous and corners are avoided in order to facilitate cleaning.

Crushed oats, it is claimed, save about 20% of this ingredient of the forage when this procedure is practicable. However, there are objections to crushing the oats. The paraphernalia necessary for crushing oats is not suitable for field service. Thus, many animals which have become accustomed to crushed oats in garrison suddenly get their type of grain changed upon taking the field and the result of this may be injurious. Furthermore, the handling of crushed oats within the organization and prior to its arrival thereat present many objections. It is much more difficult to supervise the distribution and checking of crushed oats than sacked uncrushed oats.

Storage. Constant attention must be given to avoid wastage of all grain due to inroads of rats, mice, small birds, and loose animals.

Bran. Dry bran should be fed with each feeding of oats. In addition to its other qualities, it is an excellent slow feeder.

Hay. Perhaps the greatest wastage in hay comes about through the failure of stable police to shake out the hay properly before it is placed in the manger. If two or three compressed layers of hay are placed in the manger without being properly shaken out, the animal may, in his effort to break up the compressed hay, lift the whole compact out of the manger and drop it under his feet where it is out of reach and becomes soiled. In the field great wastage of hay may be caused by the whole or a large part of the hay ration being fed at one time instead of in small amounts and often. Of course, there are many times in the field when it is impossible to feed the animals hay at frequent intervals due to their being in use most of the time. The purchase of low grade No. 2 hay is uneconomical although it is believed that a good grade No. 2 hay is quite satisfactory. It is very doubtful if the additional expense would justify the purchase of No. 1 hay at all times. It behooves all officers to keep a close watch on the hay issued to their animals. Contractors soon become expert in striking close to the border line between low grade and satisfactory No. 2 hay.

Grazing. Every advantage should be taken of local grazing facilities. The saving in forage as well as the improved health of the animal is important. On many reservations a great many tons of hay can be, and are, cut and baled each year. The cost of this hay to the government is always below the market price. Great care should be exercised in the selection of plots to be cut, otherwise many tons of inferior or useless hay are baled and issued to organizations.

Amount of Forage to Be Fed. Through many months of the year a large number of the animals of the mounted organizations can be put on maintenance ration resulting in a large saving of forage, especially in grain.

Par. 3d (2) AR 30-480 permits variation of amounts of hay and grain and provides for the purchase of special classes of forage to meet special conditions "provided a saving can be effected thereby or the cost of the ration for the station concerned is not increased." This regulation permits the increase of the hay component in relation to the decrease of the grain component. W. D. Circular 14, April 11, 1927, goes deeply into the subject of feeding and should be stressed in each animal organization so that all officers may become acquainted with its provisions.

Notes from the Cavalry Board

OFFICERS' FIELD SADDLE

The Cavalry Board, in December, 1922, recommended that the De la Clos model French saddle, manufactured by H. Marquis, Saumur, France, be copied in making the American officers' field saddle. In November, 1923, four of these saddles were received, and after a test of two years one was shipped to the Jeffersonville Q.M. Depot to be used as a model.

In the early part of 1929, five officers' field saddles were received by the Cavalry Board from the Jeffersonville Depot for the necessary test to determine the suitability of the copy for adoption by the service.

After approximately a year's test, it was found necessary to recommend certain changes in the test saddle in order to make it conform more nearly to the specifications of the French saddle submitted as a model. On April 3, 1931, a saddle manufactured according to these specifications was received by the Board and immediately put in test.

This officers' field saddle has been in the hands of the Department of Horsemanship, The Cavalry School, for the past four months, and has been generally favorably commented upon as a comfortable and excellently made article. The test will continue for a period of six months by the School, and then the saddle will be turned over to the 2d and 13th Cavalry regiments in turn for further test.

(Continued on page 62)

SPORTS

Winners, Graduation Week-May 24
Cavalry School, Fort Riley, Kansas

Event I. Non-Commissioned Officers' Class Night Ride.

Corp. Cecil A. Anders, Tr. A, 13th Cav.
Sgt. Russell B. Huckstep, M. G. Tr., 14th Cav.
Sgt. William H. Finley, Hq. Tr., 113th Cav., Iowa N. G.
Corp. Wendell F. Leap, Tr. E, 2d Cav.

Event II. Non-Commissioned Officers' Standard Stakes.

Corp. Ivan L. Ryerson, Tr. F, 2d Cav.
Corp. Wendell F. Leap, Tr. E, 2d Cav.
Sgt. Russell B. Huckstep, M. G. Tr., 14th Cav.
Mr. Sgt. Joseph C. Jackson, Hq. Tr., 109th Cav., Tenn. N. G.

Event III. Troop Officers' Class, Jumping.

Capt. Maurice Rose, Cav.
Lieut. Harrison W. Davison, Cav.
Lieut. Paul G. Kendall, Cav.
Capt. John W. Blue, Inf.

Event IV. Non-Commissioned Officers' Class, Jumping.

Sgt. Frank J. Jahemiak, Tr. A, 2d Cav.
Pvt. Theodore J. Nails, Tr. G, 9th Cav.
Sgt. McMains, D. M., Hq. Tr., 112th Cav., Tex. N. G.
Corp. Ival L. Ryerson, Tr. F, 2d Cav.

Event V. National Guard and Reserve Troop Officers' Class, Jumping.

Lieut. Hal G. Saunders, Cav. Res.
Capt. Harry E. Kistler, 117th Cav., Col. N. G.
Lieut. John L. Lee, 102d Cav., N. J. N. G.
Capt. Ellis W. Conkling, 113th Cav., Iowa N. G.

Event VI. Advanced Equitation Class, Green Jumpers.

Lieut. Peter C. Hains, III., Cav.
Lieut. Robert L. Howze, Cav.
Capt. Fred W. Koester, Cav.
Capt. George I. Smith, Cav.

Event VII. Advanced Class, Jumping.

Capt. Henry H. Cameron, Cav.
Capt. Charles J. Booth, Cav.
Capt. William R. Hamby, Cav.
Major Arthur H. Truxes, Cav.

Event VIII. Hunt Teams.

Lieut. Paul G. Kendall, Cav.
Lieut. Norman M. Winn, Cav.
Lieut. Theodore C. Wenzlaff, Cav.
Lieut. Charles H. Valentine, Cav.
Lieut. Clovis E. Byers, Cav.
Lieut. Thomas L. Robinson, Cav.
Capt. Sexton Berg, Cav.
Major Arthur H. Truxes, Cav.
Capt. Charles J. Booth, Cav.

Event XII. Advanced Equitation Class, Olympic Prospect Competition, All Phases.

Lieut. Joseph K. Baker, Cav.
Lieut. George E. Mitchell, Jr., F. A.
Lieut. Carl W. A. Raguse, Cav.
Lieut. Frank DeK. Huyler, Cav. Res.

Event XIII. Advanced Equitation Class, Green Schooled Horse Competition.

Capt. George I. Smith, Cav.
Lieut. Thomas Robinson, Cav.
Capt. Fred W. Koester, Cav.
Lieut. Laurence K. Ladue, Cav.

Event XIV. Swordsmanship Competition.

Lieut. August W. Farwick, Cav.
Lieut. Paul G. Kendall, Cav.
Lieut. Theodore C. Wenzlaff, Cav.
Lieut. Malcolm D. Jones, Jr., Cav.

Event XV. Combined Pistol and Saber Competition, Troop Officers' Class and National Guard and Reserve Troop Officers' Class.

Lieut. Charles A. Sheldon, Cav.
Lieut. Malcolm D. Jones, Jr., Cav.
Lieut. Paul G. Kendall, Cav.
Lieut. Raymond D. Palmer, Cav.

Event XVI. Combined Pistol and Saber Competition, Non-Commissioned Officers' Class.

Sgt. George J. Burns, 103d Cav., Pa. N. G.
Corp. Carl S. Brush, Tr. A, 6th Cav.
Sgt. Frank J. Jahemiak, Tr. A, 2d Cav.
Sgt. Russell B. Huckstep, M. G. Tr., 14th Cav.

Event XVII. Troop Officers' Class Jumping, Indoor.

Lieut. Theodore C. Wenzlaff, Cav.
Lieut. Charles A. Sheldon, Cav.
Capt. Frank C. Hershberger, V. C.
Lieut. John L. Ryan, Cav.

Event XVIII. National Guard and Reserve Officers' Class Jumping, Indoor.

Lieut. Dean C. Morgan, 115th Cav., Wyo. N. G.
Lieut. Harry C. McNew, 104th Cav., Pa. N. G.
Capt. William C. Lyda, 109th Cav., N. C. N. G.
Lieut. William T. Starr, 112th Cav., Tex. N. G.

Event XIX. Non-Commissioned Officers' Class Jumping, Indoor.

Corp. Raymond J. Tibbetts, Tr. A, 13th Cav.
1st Sgt. George J. Burns, 103d Cav., Pa. N. G.
Corp. Henry S. Dugdale, Tr. B, 8th Cav.
Sgt. Thomas Sapash, Tr. A, 11th Cav.

Event XX. National Guard and Reserve Advanced Troop Officers' Classes Point to Point Ride.

Capt. Robert M. Blair, 110th Cav., Mass. N. G.
Lieut. Frederick M. Warren, 123d Cav., Ky. N. G.
Lieut. Mayer H. Halff, Cav. Res.
Lieut. Andrew S. Paterson, 122d Cav., Conn. N. G.

Event XXI. Advanced Equitation Class, Green Polo Pony Competition, All Phases.

Capt. George I. Smith, Cav.
Lieut. Peter C. Hains, III., Cav.
Lieut. Charles H. Valentine, Cav.
Lieut. John H. Stadler, Jr., Cav.

Event XXII. The Norwich Stakes.

Capt. Ernest A. Williams, 9th Cav.
Lieut. Theodore C. Wenzlaff, Cav.
Lieut. Paul G. Kendall, Cav.
Capt. Henry E. Cameron, Cav.

Event XXIII. Horseshoeing Judging Competition.

Lieut. Norman M. Winn, Cav.
Lieut. Basil L. Riggs, Cav.
Lieut. Milo H. Matteson, Cav.
Lieut. Leslie M. Grener, Cav.

Event XXIV. Student Officers' Night Ride.

Lieut. Milo H. Matteson, Cav.
Lieut. Leslie M. Grener, Cav.
Lieut. Rufus L. Land, Cav.
Capt. Catesby ap C. Jones, Cav.

Event XXV. Troop Officers' All Around Equestrian Championship.
Lieut. Theodore C. Wenzlaff, Cav.
Event XXVI. Cavalryman's Cup.
Lieut. Raymond D. Palmer, Cav.
Event XXVII. The Lorillard Cup.
Lieut. Peter C. Hains, III., Cav.
Event XXVIII. The Platoon Leaders Trophy.
Capt. William C. Lyde, 109th Cav., N. C. N. G.
Event XXIX. The Non-Commissioned Officers' Trophy.
Sgt. Russell B. Huckstep, M. G. Tr., 14th Cav.

BOOTH BOWL

The Booth Bowl has been awarded to Lieutenant Colonel Charles L. Scott, Cavalry, for outstanding interest in, and untiring efforts for, all forms of Cavalry activity, sports and competitions throughout the year. Through his active leadership of, and participation in, most of these activities, and particularly by organizing, leading and supervising successfully the forced march of 100 miles participated in by students and vital elements of school troops, Colonel Scott contributed materially to the knowledge and enthusiasm of other officers of the command.

Cavalry School Horse Show and Race Meeting, May 27-30, 1931

OLYMPIC JUMPERS:
Lt. E. F. Thomson, *Mussolini*
Lt. J. W. Wofford, *Juror*
Lt. A. A. Frierson, *S-3*
Capt. W. B. Bradford, *Starfinch*

OLYMPIC TEAM JUMPERS:
Lt. R. W. Curtis, *Ansonia*
Lt. J. W. Wofford, *Peter Pan*
Lt. A. A. Frierson, *S-3*
Capt. J. T. Cole, *Avocate*

CHAMPION HUNTER:
Mrs. E. N. Hardy, *Knockshegowan*

RESERVE CHAMPION:
Lt. I. P. Swift, *Alexander*

CHAMPION SADDLE HORSE, 3-GAITED:
Maj. C. R. Cravens, *Astral Bellrose*

RESERVE CHAMPION:
Miss M. Spreckert, A.N.C., *Wildfire*

OFFICERS' CHARGERS:
Mrs. I. T. Wyche, *Krippalong*
Capt. F. W. Koester, *Erinite*
Maj. D. S. Perry, *Black Bart*
Capt. F. W. Koester, *Show Girl*

CHILDREN'S HORSEMANSHIP CLASS:
Billy Koester, *Follow Me*
Patsy Smith, *Rio Rita*
Arly Jane Barnett, *Burgess*
Betty Augur, *Howick*

ENLISTED MEN'S JUMPING:
Pvt. L. Hargon, Tr. E, 9th Cav.
Pvt. C. C. Carpenter, Tr. E, 13th Cav.
Pvt. J. E. Bass, Tr. E, 9th Cav.
Pvt. L. W. Roberson, Hq. Tr., 13th Cav.

BEST TURNED OUT INDIVIDUAL TROOPER:
Corp. B. Galstad, Tr. A, 13th Cav.

RIFLE SQUAD COMPETITION:
Corp. C. Costigan's Squad, B, 2nd Cav.

MACHINE GUN SQUAD COMPETITION:
Corp. N. F. Kline's Squad, M. G. Tr., 13th Cav.

BEST TURNED OUT ESCORT WAGON:
Pvt. A. Van Horn, Tr. E, 2nd Cav.

BEST TURNED OUT LIGHT WAGON:
Pvt. E. G. Wright, M. G. Tr., 2nd Cav.

BEST TURNED OUT ARTILLERY GUN CARRIAGE:
Battery D, 18th F. A.:
2nd Section, Sgt. Dale A. Young

RIMROCK FLAT RACE:
Midget, E, 2nd Cav., Pvt. Ouellette up

LIFE O'RILEY STEEPLECHASE:
Llewellyn, Cav. School, Capt. J. C. Macdonald up

GEARY COUNTY FLAT RACE:
Lady Amorous, ridden by E. P. Tully, owner

OLYMPIC STEEPLECHASE:
The Squire, Cav. School, Lt. J. K. Baker up

SMOKY HILL FLAT RACE:
Rosefield, Capt. Heavey, Lt. C. L. Ruffner up

CAVALRY SCHOOL HUNT STEEPLECHASE:
Reno, R. L. Jurden, ridden by W. W. Gurnsey

KAW FLAT RACE:
Spencer, Cav. School, Pvt. Schima, B, 2nd Cav. up

CAVALRY SCHOOL STEEPLECHASE:
Reno, R. L. Jurden, ridden by W. W. Gurnsey

GRASS RIDERS' GRUB STAKES:
Brown L., ridden by W. J. Weisner

QUIVIRA STEEPLECHASE:
Frills, Cav. School, Lt. C. B. Hutchinson up

PAWNEE FLAT RACE:
Lord Sabin, Cav. School, ridden by Lt. P. C. Hains, III

CAVALRY MEMORIAL CUP STEEPLECHASE:
Lady Finn, Cav. School, Lt. E. R. Tausch up

WANTED:—A copy of "The Desert Mounted Corps," Preston. Address The Cavalry Journal.

Organization Activities

1st Cavalry
Fort D. A. Russell, Texas

TROOP B, 1st Cavalry, commanded by Captain Byron E. Shirley, having received the highest percentage rating of proficiency is announced as the winner of the Curtis Cup and Guidon for the training year 1930-1931.

2nd Cavalry
Fort Riley, Kansas

WITH a detail from the Machine Gun Troop, 2nd Cavalry, using the one-pounder gun for the prescribed salute, Troop B, 2nd Cavalry, escorted Vice President Curtis at the dedication of old Fort Hays, June 23, 1931, as a new state park at Hays, Kansas. The regimental field music as well as the troop and detachment were under the command of Captain Garnett H. Wilson.

Both the 1st platoon, Troop A, 9th Engineers and Troop B, 2nd Cavalry, had each won a "leg" on the post baseball championship prior to the trip to Hays. Upon their return Troop "B" won the final game of the series by a score of 12 to 3.

The regiment is carrying out its annual pistol and saber practice with excellent results. While the Kansas river is in its lower stages, this regiment is devoting considerable attention to training men and horses in swimming the river.

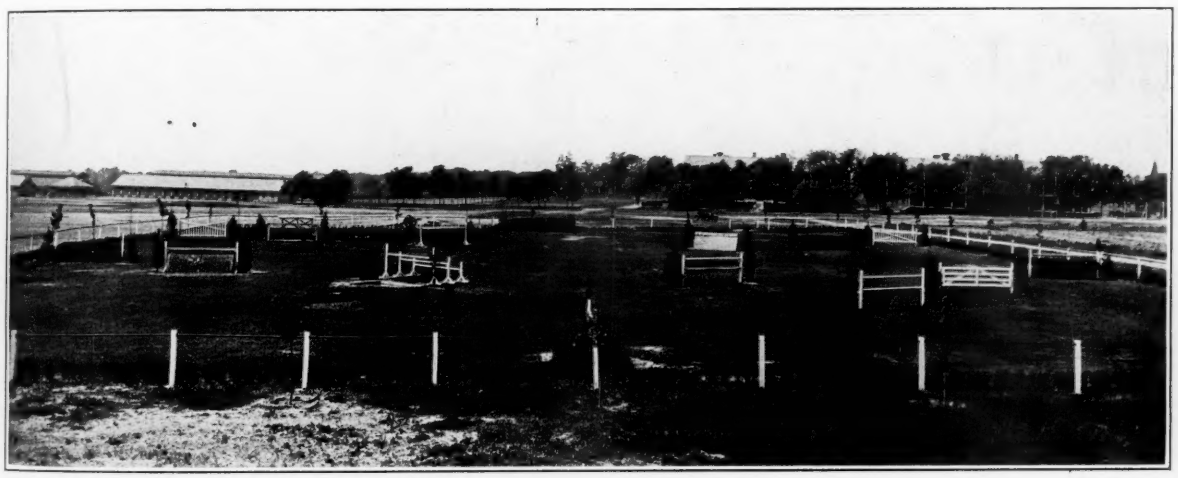
A post polo team composed of Major Lawrence, 2nd Cavalry, Major Thayer of the Cavalry School faculty, First Lieutenant George Read and First Lieutenant Henry C. Hine, both of the 2nd Cavalry, on July 9th won a 13 to 11 victory over the Fairfield Club of Wichita in the Fort Leavenworth invitation polo tournament, according to the Kansas City Star.

3rd Cavalry (less 1st Squadron)
Fort Myer, Virginia

THE regiment is engaged at present with the summer training camps. 275 CMTC students, 35 ROTC students from V.M.I. and the 305th, 306th, 307th and 308th regiments, Cavalry Reserves, have been ordered to the post.

The Fort Myer Polo Team, consisting of Major A. D. Surles, Major J. W. Cunningham, Captain F. W. Ligon, 1st Lieutenant C. H. Noble and 1st Lieutenant W. A. Holbrook, Jr. played in the recent War Department Invitation Tournament and in the Argentine Cup Tournament. In the first match the team played to the finals, being eliminated by the War Department Whites. Two shipments of polo prospects have been received from Fort Reno and Front Royal. 1st Lieut. F. W. Makinney, Jr. is at Mitchell Field trying out for the Army team.

Many additions have been made to the post by Colonel Harry N. Cootes, regimental commander. Among these is a new entrance gate and the planting of numerous shrubs and bushes. Most interesting to horsemen is the new jumping pen modelled after the international course at the National Horse Show, Olympia, London. The course is sodded and is enclosed by a pipe fence, beneath which hedge is planted. Uprights are laid in concrete, brush obstacles are made of the growing plant, and brick walls and stone walls are solidly constructed of the real materials. A pipe line has been laid to the field for watering and for filling the concrete water jumps.



Fort Myer Olympic Course.

1st Squadron, 3rd Cavalry
Fort Ethan Allen, Vermont

DURING the month of June the 1st Squadron, 3rd Cavalry, went into camp for two weeks at the Fort Ethan Allen Artillery Range at Underhill, Vermont. Fifty-five Cavalry Reserve Officers were attached to the Squadron for training during this period.

Demonstrations of all forms of cavalry activities were given for the benefit of the Reserve Officers, who had an opportunity to command platoons and troops.

In addition to training of Reserve Officers, the Squadron engaged in squadron and platoon combat firing and musketry exercises. The varied terrain of the Artillery Range permitted a variety of problems to be fired and ranges over one thousand yards were available, exceptionally good facilities for this type of training.

During the month of July the Squadron will be engaged in training over three hundred CMTC students and in August will train one hundred and fifty-five Reserve Officers.

4th Cavalry
Fort Meade, South Dakota

DURING the past month, the Regiment has welcomed its new commanding officer, Col. O. W. Rethorst; the new Post Quartermaster, Capt. M. M. Goodwyn; and 1st Lt. R. L. Land, who has just completed the troop officers' course at the Cavalry School.

Col. Alexander M. Miller, GSC, Chief of Staff, accompanied by Lieut. Col. Alfred Brandt, GSC, Assistant Chief of Staff, G-3, and Capt. Earl C. Ewert, Field Artillery, Assistant G-3, all of Hqrs. 7th Corps Area, Omaha, Neb., arrived at Fort Meade on Saturday, June 20th, by government car, for the purpose of observing normal training activities of the regiment.

Major-General Johnson Hagood, Commanding the 7th Corps Area, arrived at Fort Meade on June 23, accompanied by his son, Lieut. Johnson Hagood, Jr. The purpose of General Hagood's visit to the Black Hills was to inspect the South Dakota National Guard encampment at Rapid City.

A party of six officers from this post were the guests of Fort Robinson, Neb. during their recent Polo Tournament and Horse Show. The Fort Meade Polo team tied with the Fort Robinson team in games won, but the Fort Robinson team having earned one more goal during the tournament, was declared the winner. Members of the team, together with Sgt. Edward Hayes and Sgt. John Doherty of Troop "B," 4th Cav., succeeded in winning a total of four blue ribbons, five red ribbons and four third places in the horse show.

Troop F, 4th Cavalry, accompanied by the Band, made its annual trip to Belle Fourche, S. D., to participate in the Black Hills Roundup Celebration, held on July 2, 3, and 4.

5th Cavalry
Fort Clark, Texas

ON May 5th the entire Regiment (less Band) left Fort Clark, Texas, by marching, enroute for Camp Bullis, Texas, for the purpose of participating in maneuvers with the Second Division. The Regiment returned to Fort Clark on May 26, 1931.

Colonel S. Field Dallam who has commanded the Regiment since September 22, 1928, has recently received orders relieving him from his assignment and duty with the Fifth Cavalry and ordering him to duty with Headquarters Fourth Corps Area, with station at Fort McPherson, Georgia.

The high degree of efficiency maintained by the Regiment while under Colonel Dallam's command is evident from a review of some of the more prominent duties performed during that period. In 1928 Troop F received enthusiastic commendation from Field Marshal Allenby for its appearance and musical drill. In 1929 Troop A took second place in the Goodrich Trophy Contest; first place being awarded on a score of 100 per cent. During this year the Regiment received the commendation of the Corps Area Commander and civil authorities for its work in connection with the border troubles of that year. In 1930, Major General Lassiter, following his inspection, commended the Regiment for its "Soldierly appearance, excellent morale and fine regimental spirit." After the 1930 maneuvers against the Second Division, the Corps Area Commander expressed his "Very high appreciation of the excellent spirit shown, ingenuity they showed in overcoming difficulties and of the very successful way in which they performed the mission assigned them." In the fall of that year General Summerall in a letter of commendation after his inspection said, "The Fifth Cavalry, under the Command of Colonel Samuel F. Dallam, has maintained the high standard heretofore noted in that Regiment. The escort troop was handsomely mounted and the uniform, equipment and bearing of the men were worthy of the Regiment." The 1930 Draper Trophy was awarded to Troop E.

6th Cavalry
Fort Oglethorpe, Georgia

THE entire period has been devoted to the ROTC, and CMT Camps.

Brigadier General Edward L. King, visited the post on June 22d and Major General Guy V. Henry on July 7.

Major Walter E. Buchly joined the regiment on July 6th.

1st Lt. C. B. Hutchinson, joined the regiment on July 7th.

The following officers have left the regiment:

Captain S. R. Goodwin.—Fort Leavenworth, Kansas.
Captain G. L. Caldwell.—Fort Riley, Kansas.
Lieutenant W. H. Hunter.—Fort Riley, Kansas.
Lieutenant R. C. Lowe.—Fort Riley, Kansas.

7th Cavalry
Fort Bliss, Texas

LAST May, the regiment participated in the Cavalry Division Maneuvers in the Sacramento Mountain region. The situations and terrain were such as to test men, animals and equipment to the utmost, and the Seventh came through in fine shape with very few casualties.

The month of June was devoted to preliminary target practice, and reconstruction of officers' quarters, and the month of July to these activities and to the training of reserve officers from the 311th and 312th Cavalry.

In August the Seventh will replace the Eighth on the target range.

Little has been done in the way of polo or jumping since the middle of May. In the polo tournament, the Senior Garry Owen team came out first, defeating the 82nd Field Artillery team in the final and deciding game with the score 10-7. The junior team took second place in its division, losing to the Division Headquarters four.

In the April Horse Matinee, the Seventh again took first place, having won every other matinee of the season. The team excelled particularly in schooling phases.

The regiment regrets the loss of Lieut.-Col. Frank Keller, Major J. J. Bohn, Captain C. L. Stafford, Captain F. T. Bonsteel, Captain J. V. Gagne, Lieut. L. L. Judge and Lieut. J. T. Riepe, all of whom have left or will leave this summer, and it extends a cordial welcome to Lieut.-Col. H. E. Mann, Captain O. S. Peabody and Lieut. F. O. Dewey who have recently joined.

8th Cavalry
Fort Bliss, Texas

THE regiment left Fort Bliss for the Dona Ana Target Range July 6th. The target season will last until August 1st when the regiment will return to the post.

During the month of June the regiment acted in the capacity of parent organization for the CMT and ROTC Camps held on this post.

Recent losses to the regiment are Captain Stanton Higgins, Captain B. H. Graban, Lieutenant C. P. Bixel and Lieutenant H. A. Luebbermann, all of whom have been ordered to the Cavalry School at Fort Riley; Captain A. J. Wynne who has been ordered to Tank School; Lieutenant E. L. Rhodes who has been ordered to Air Corps Primary Flying School at Brooks Field, Texas.

9th Cavalry
Fort Riley, Kansas

MAJOR Edward C. McGuire, is relieved from assignment to the 9th Cavalry, effective September 3, 1931, and is detailed as a student in the Tank School, 1931-1932.

First Lieutenant Gilman C. Mudgett is detailed to pursue a course of instruction at the Cavalry School, Saumur, France, and sailed from New York City, July 1, 1931.

The following officers of the regiment attended the Mission Valley Hunt Race Meet at Kansas City, Mo., May 2 to 4, 1931: Captains Marion Carson, Rufus S. Ramey, Edwin M. Burnett, First Lieuts., Francis P. Tompkins, Gilman C. Mudgett and Hayden A. Sears.

11th Cavalry
Presidio of Monterey, Cal.

THE Presidio-Monterey Peninsula Horse Show was held at the Del Monte Polo Field June 19th to 21st, inclusive. This Horse Show was managed by Presidio personnel and, being very successful, a considerable sum was available for local charities. Lt. E. L. Harrison was individual high point winner.

The usual marches during April and May were varied by the First and Second Squadrons and the Machine Gun Troop making pack trips over the Santa Lucia Mountains in the Santa Barbara National Forest. The Machine Gun Troop encountered a good sized forest fire and, being the first to arrive, had a large part in the checking of the blaze. Letters of commendation for the work done by the troop were received from both the state and federal forest service.

12th Cavalry
Fort Brown, Texas

JUNE 30th brought to a close the annual small arms practice of the troops of the 12th Cavalry stationed at Fort Brown, Texas. The results obtained were highly gratifying to the Regimental Commander, Colonel Francis W. Glover.

A review of the Regiment (less 2d Squadron), was tendered Technical Sergeant Ralph Oggitio, Headquarters Troop, 12th Cavalry, on the occasion of his retirement from active service on April 24th.

A gesture of international amity typical of the relation of American and Mexican military officials along the Border was enacted at Fort Brown on June 10th when Colonel Francis W. Glover, commanding the 12th Cavalry, presented General of Division Eulogio Ortiz, with Headquarters at Monterey, Mexico, with a saber which Colonel Glover carried in the Spanish-American War. The presentation took place at Colonel Glover's quarters where General Ortiz was making a formal call, attended by General Serrano, Commander of the military garrison at Matamoros, by Mayor Roberto Garcia of Matamoros, Chief of Customs Leopoldo Verdugo, of Matamoros and members of the garrison at Fort Brown. Last fall at Reynosa, Mexico, a similar event took place with Colonel Glover as the recipient of a handsome hand embroidered *charro* uniform and ornately inlaid saddle from General Ortiz.

2nd Squadron, 12th Cavalry
Fort Ringgold, Texas

SEVERAL changes are being made in the officer personnel. Major Robert C. Rodgers relieved Major Geoffrey Keyes as Squadron and Post Commander. Major Keyes having been ordered to the Ecole de Guerre. Captain Rossiter H. Garity is on leave upon the completion of which he will report to the Cavalry School. Lieutenant George C. Claussen will depart on leave about July 15th upon completion of which he will sail for the Philippines. Captain Benjamin A. Thomas has reported for duty and Captain George A. Goodyear and Lieutenant Egon R. Tausch will join the command upon completion of leaves.

13th Cavalry
Fort Riley, Kansas

A NUMBER of changes in the commissioned personnel have recently taken place.

On May 20, Colonel Alexander B. Coxe relieved Colonel Walter S. Grant as regimental commander.

Major Arthur D. Truxes, Captain Edwin M. Burnett, First Lieutenants Paul G. Kendall and Eugene L. Harrison (on duty with Olympic Equitation Team) have joined the regiment.

Major Harold Thompson will join the regiment in September to replace Major Edwin N. Hardy who has been detailed to the General Staff Corps. Major Nelson M. Imboden leaves the regiment in September for Leavenworth.

Captain Charles E. Dissinger has left the regiment to be assigned to the staff and faculty.

Master Sergeant Owen H. O'Rourke and Staff Sergeant Anthony Hungler, both of the Headquarters Troop, recently retired after completing 30 years service. The former saw service in China, the Philippines, and in France during the World War, and the latter in Cuba and the Philippines.

14th Cavalry (less 1st Squadron)
Fort Des Moines, Iowa

LT. COLONEL G. H. BAIRD relinquished command of the regiment and left for duty with Organized Reserves, Louisville, Ky., on July 1, 1931. Lt. Colonel Talbot Smith taking over the regiment. A farewell party in honor of Lt. Col. Baird was given by the officers of the regiment.

Hq. Troop, 106th Cavalry
(Chicago Black Horse Troop) Illinois N.G.

ORGANIZED early in 1929 as headquarters troop of the 106th regiment, the Chicago Black Horse Troop now has two years and two summer camps to its credit and feels qualified to lift its voice in these pages. The troop has been particularly fortunate in its officers and instructors during this development stage, and has profited greatly from the earnest efforts of Capt. Stockton and Lt. Buckland, detached from the regular army as instructors for the troop.

The Troop officers are: Captain Chauncey McCormick, 1st. Lt. Paul Butler, 2nd. Lt. Roy D. Keehn, Jr., and 2nd. Lt. Willard Meyers.

As first sergeant of the troop stands a name familiar to nearly the whole regular army—Dan Doyle. An example of the versatility developed in the cavalry is shown by his ability, after a quarter century of regular army training, to so ably fill his present position. Not only is he a first sergeant and caretaker second to none, but he has become a friend and advisor to every officer and man in the troop. His fund of army lore, collected in nearly every branch of the service, has been of constant assistance in his work here. He has become to the Black Horse Troop what he was to the regulars—an inspiration as a man and a soldier.

Troop B, 109th Cavalry
Tennessee N. G.

THIS organization on May 2-3 conducted a mobilization test and a practice march. The march was from Chattanooga, Tenn. to Catoosa, Ga. and return and covered a distance of 42 9/10 miles. We believe that this is a very good record for distance and a little bit out of the ordinary for National Guard cavalry during armory training period.

305th Cavalry
Philadelphia, Pa.

A REVIEW of the work accomplished during the inactive training season, 1930-31, indicates very substantial progress having been made by the regiment during the past year.

This regiment having been designated for active duty training at Fort Myer, Va., July 5-18, 1931, in connection with the training of the CMTC, has for the past several months given much time to preparation of the work to be done while in camp.

Seventeen officers reported at Fort Myer, Va., on July 5th for 14 days active duty training.

306th Cavalry
Baltimore, Md.

THE inactive duty training of the 306th Cavalry for the year 1930-1931 was brought to a close by a dinner at the New Maryland Country Club on June 24, 1931.

Colonel John Philip Hill acted as toastmaster. The Honorable Howard W. Jackson, Mayor of Baltimore, was the principal guest of the evening and addressed the officers of the regiment. The following officers of the regular army were present and spoke to the regiment: Colonel John D. Long, Cavalry (DOL), Colonel J. T. Conrad, AGD, Colonel F. R. Brown, AGD, Colonel C. A. Seoane, S. C., Major E. W. Taulbee, Cavalry, DOL.

3rd Sq. and M. G. Tr., 307th Cavalry
Norfolk, Virginia

A VERY impressive parade was held in the city of Norfolk on Memorial Day with contingents from the United States Navy, Virginia National Guard, Veterans' Organizations and the city of Norfolk participating. The unit Instructor, Major David H. Blakelock, Cavalry (DOL), acted as Grand Marshal of the parade. Major James R. Mullen, commanding the Squadron and Lieutenants W. L. Renn, Jr. and R. B. Batte, Cavalry Reserve, acted as aids.

The officers of the Squadron have combined with other Reserve Officers in the city for the establishment of a Beach Club at Cape Henry, Va. A barracks building has been secured at Fort Story for the club, which has ample accommodations for the officers and their ladies, and many enjoyable parties are anticipated for the summer months.

307th Cavalry
Richmond, Virginia

ONE of the most successful inactive training periods in the history of the regiment was brought to a close on June 30, 1931.

Twenty-four officers of the regiment have been ordered to active duty at Fort Myer, Va., August 2-15, 1931.

308th Cavalry
Pittsburgh, Pa.

ACTIVE duty training now holds the center of the stage with many officers actively preparing themselves for their duties with the CMTC this summer at Fort Myer.

The most interesting event since the last issue of the JOURNAL was the practice march in which 16 officers took part on May 30 and 31, 1931.

Lieutenants Goldsworthy and Thomas with Sergeant Cence are spending their vacation this year on horseback. They are now out in the mountains on a two weeks ride during which they will carry their own shelter and rations, and camp wherever and whenever they see a place that strikes their fancy.

The outdoor polo season is well under way in Pittsburgh. The regimental team has as usual been playing a very fine brand of polo with games at Monongahela City and at the Pittsburgh Polo Club.

The last unit meeting before camp will be held at the Cavalry Club at Aspinwall, Saturday, July 11, where there will be rifle, pistol and saber practice in the afternoon and dinner at the Aero Club, after which we will return to the Cavalry Club and gather around an outdoor fire for the evening.

The June meeting was well attended and among those present were a number whom we have not seen for some time.

862nd Field Artillery (Horse)
62nd Cavalry Division

LIEUTENANT Colonel Albert Gilmor, CAC, who has been Unit Instructor of the regiment since the time of its organization about two years ago, was relieved effective from June 8th, and ordered to Fort Monroe for duty. The new Unit Instructor will be Lieutenant Colonel Walter H. Smith, F. A.

A review of the work accomplished during the inactive training season that has closed, indicates very substantial progress having been made by the regiment during the past year,—beginning with the month of February, the practice having been inaugurated of holding two regimental conferences monthly instead of one as regularly prescribed, and it has been very

Lt. Col. F. K. Chapin, Unit Instructor, 307th Cavalry on His Hunter, Princess Pat.

gratifying to note that the additional conferences were well attended and the interest well sustained—so much so, that it is planned to continue the practice next year.

During May and June, two officers of the regiment accepted commissions in the National Guard—Captain Edward L. Rich, Jr., F. A. Res., becoming a Captain, and First Lieutenant J. Rieman McIntosh, F. A. Res., becoming a First Lieutenant in the 110th Field Artillery of the Maryland National Guard. The transfer of our Reserve officers to the National Guard is encouraged whenever suitable vacancies become available, and should serve to promote a mutuality of interest that it is believed will prove increasingly helpful to both the National Guard and the Reserve as time goes on.

The regiment will go to Fort Hoyle on August 2nd for two weeks of active duty under the guidance of the Sixth Field Artillery, with which regiment it has had the privilege of serving for the past two years. Approximately 60 per cent of the available officers of the regiment will receive active duty training this year.

BOOK REVIEWS

NEW WARS: NEW WEAPONS, by Lieutenant Commander The Honorable J. M. Kenworthy, R.N., M.P., formerly The Admiralty Staff, London. Elkin Mathews & Marrot, London; 160 pages, with frontispiece; 3s 6d net; 1930.

The author invites attention to the fact that we are spending more money for weapons and defense each year than before the World War, and he tries to show the way for efficient spending on modern, instead of obsolete weapons.

After a brief recital of the history of the development of weapons, the evolution of naval warfare, the passing of the great battleship, a wastage of the taxpayers' money, a discussion of airplanes versus battleships, the real peril, campaign in three dimensions, the aerial offensive, and the changes the times have brought about, Commander Kenworthy sums up his case in rationalizing, as he sees it, the national defense. His thesis is well taken. There is much to be said for his conclusions, even if one disagrees with some of his arguments. His attitude in the parliamentary debates is indicative of a position, well taken, and seriously interesting to the law-makers of Great Britain.

The author holds that a unified Ministry of Defence, a concentration upon aerial, gas, chemical and mechanical developments, are dictated. Again, there is much to be said for his conclusions.

H. G. Wells, after reading his book, says that the narrative "is altogether admirable. * * * Vivid imagination with real knowledge and experience. * * * Extraordinarily convincing."

Rationalization of armaments, policies, mutual international agreements, disarmament treaties and actual demonstrations of performance for peace are necessary on all side for complete cooperation toward peace. Preparedness for war, must, therefore, come economically with the newest and most efficient weapons for the next or newest wars.

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THE AMERICAN BLACK CHAMBER, by Herbert O. Yardley. Bobbs-Merrill Co., Indianapolis, 1931. 370 pages, illustrated. $3.50.

A book you will enjoy. The achievements of the Cryptographic Section of the Military Intelligence Division of the War Department General Staff during the World War are told in a most interesting and absorbing way in Major Yardley's book.

It will come as a distinct shock to Americans to learn that the most secret and confidential code cablegrams and messages of the United States were easily decoded and probably read by our Allies as well as by enemy and neutral countries. False security is the dangerous state in which we lived. Thousands of lives were needlessly sacrificed through the breakdown of our combat codes; and, conversely, thousands of lives were saved through the ability of our cryptographers to break down speedily the constantly changing codes of our enemies.

We can't all be cryptographers, but we can and should know enough of the subject to realize the power of a skilled cryptographer to understand our most secret radio, cable, and wire communications.

In diplomacy as well as in warfare the cryptographer plays a major rôle—defensively as well as offensively. The nation that can maintain secrecy for its communications and read the cablegrams and radiograms of other nations is often in a position to gain its legitimate ends without being forced to go to war. The ethics of the case may be debatable, but Stephen Decatur's memorable words persist in recurring to this reviewer.

Aside from the purely military lessons to be learned from *The American Black Chamber,* the book is heartily recommended to the average reader for its illuminating discussions of secret inks, analytical solution of codes and cyphers, the workings of MI-8, the operations of foreign powers in cryptography, the intrigue and espionage incident to the war, and the vital part played by the cryptanalysis during the Peace Conference and the Washington Disarmament Conference as well as during the World War.

The book is more interesting and intriguing than a first class detective story, for it possesses not only the dramatic suspense of such stories, but it bears the unquestionable stamp of absolute authenticity. It is recommended to our readers as an outstanding work of military and national interest. If you love mystery, intrigue, dramatic suspense; if you enjoy a peek—many peeks—behind the scenes, *The American Black Chamber* will more than satisfy you.

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LOYALTIES—MESOPOTAMIA, 1914-1917, by Lieut. Col. Sir Arnold T. Wilson; 340 pages. Oxford University Press, London, 1930. Price $10.00.

The author, who held the position of Acting Civil Commissioner in Mesopotamia, recounts his experiences in the legendary Garden of Eden from the outbreak of the World War to the death of General Maude. The interesting narrative covers both the military and non-military phases of the Mesopotamia campaign. The author depicts the difficulties of terrain, vagaries of the weather, and extremes of climate that tested the endurance of all ranks. He details the serious problems of supply complicated by long and imperfect lines of communications. Colonel Wilson has much to say that is complimentary and otherwise about the conduct of the Mesopotamian campaign.

The story is admirably told, with an exceptional breadth of view and deep human sympathy and understanding. A large number of portraits add to the general interest. The appendix contains a number of interesting documents including two that should prove very interesting to philatelists. A very elaborate bibliography and an excellent map complete the volume.

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WITH MEADE AT GETTYSBURG by George Gordon Meade. Published by the John C. Winston Co., Philadelphia. 201 pages..

Whether justly or not, Major General Meade has been severely criticized for not instituting a more vigorous pursuit of General Lee and the defeated Confederate forces, after their repulse at the Battle of Gettysburg. As long as men will continue to argue and defend their own ideas such controversies always arise—and no one yet ever heard of any one ever changing his opinion.

Published under the auspices of the War Library and Museum of the Military Order of the Loyal Legion of the United States, Philadelphia, Pa., this book was compiled by General Meade's son and edited by his grandson. It is plainly for the purpose of putting General Meade's side of the argument before the public. Copious extracts are made from the General's personal correspondence to his wife, from his orders issued in the field, and from his testimony before Congress nine months after the battle. Also there are extracts from General Halleck's letters to General Meade. Twenty-four maps help the reader form a picture of events, which would almost be impossible from just reading the written details.

The author opens the narrative with a very sketchy outline of the Civil War in the east up to the assignment of General Meade to the command of the Army of the Potomac. With the aid of good maps the reader is then given a clear picture of the distribution of the federal forces in the Maryland-Pennsylvania area, and their concentration on Gettysburg. Following this is a detailed description of the movements and actions of almost every Union brigade, insofar as it was directly concerned with the fighting, on the first, second, third, and fourth days of the battle. This is supplemented by enough information of the Confederate forces to give the complete story. Then the Confederate retreat and the Union hesitation, and finally the Confederate offer of battle at Williamsport and the refusal of Meade to accept.

If the reader is willing to accept the limited mission of the Army of the Potomac as given by the author, namely "the mission of the Army of Northern Virginia was to establish for the Confederacy an offensive military supremacy on Northern soil and the mission of the Army of the Potomac was to defeat the Army of Northern Virginia in accomplishing its mission," then the book has accomplished its mission. But there will probably be quite a few readers who will be unwilling to accept such a limitation to General Meade's mission, especially after the crushing repulse administered to the Confederates on the third day. The magnificent conduct of the troops during the three days fighting, their worn out condition, the shortage of supplies, and the like, are all brought forth to show why it was not considered wise to attack a foe who time and again had demonstrated his fighting ability, and who at this particular time was occupying a strongly entrenched position. General Meade states that for him to have attacked Lee on the fourth day would have resulted in the same disaster for the Union forces that the Confederates suffered on the third day. The reader can judge for himself who was right—General Meade, or his critics. There is one positive outstanding fact, and that is that we cannot help but be thrilled at the splendid tactical handling of his forces by General Meade during battle. To offset that, though, is the habit of calling his corps commanders together "for consultation," which, however one may try to disguise it, was nothing more nor less than a council of war. Fatal to aggressive action since time began.

It is an interesting book. For those who wish to have a splendid reference in their library on the Battle of Gettysburg this will be a welcome addition.

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THE MARTIAL SPIRIT, by Walter Millis. Published by Houghton Mifflin Company, 1931. 410 pages. $4.00.

This book concerns our war with Spain. The author states "the foregoing book was undertaken rather as an essay in history than as history itself" and "it may seem that I have stressed the satiric aspects of war." It is certainly written in a sort of jazzy, serio-comic style, and at the same time is strongly satirical. Just what the real object of the book is, is hard to determine.

The reviewer has heard from childhood that our war with Spain was probably unnecessary, and brought on by a powerful group of "yellow journals." Mr. Millis stresses this factor. He describes very graphically the immense power of the press, and clearly shows the influence it had in working the public up to the war pitch. In his comments and criticism of the part polities played in using the press, both to bring on the war, and then later to handicap the operations of both the Army and Navy, he points out a grave danger to be avoided in the future.

In his dealings with personalities the author seems to cheapen the book. He is an excellent "second guesser." With sarcasm and innuendo he savagely criticizes the older Theodore Roosevelt, Henry Cabot Lodge, and William Randolph Hearst, together with a host of their contemporaries, the great majority of whom are now dead and of course unable to defend themselves. The author seems to forget that in preparing his essay he had the advantage of studying thirty years of debate on this particular subject, both oral and written, and access to the records of both Governments. It is not apparent in his criticisms that he has taken that fact into account, and that the leaders of the country, political, civilian and military, made their decisions and acted solely on the information that they had at the time. It hardly seems fair to abuse and ridicule men now dead for their thoughts and actions in

the eighteen-nineties in the light of developed information in the nineteen-thirties. It is only just to state, however, that the book seems to "knock" practically everybody and everything.

The evils of a non-censored press and unlicensed political meddling in military affairs in time of war are interestingly set forth.

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IN THE ENEMY'S COUNTRY, by Joseph Crozier. A. A. Knopf & Co., New York, 1931. 235 pages.

Joseph Crozier, a French business man and aviation enthusiast, became the head of a secret service group in Holland during the World War. He tells the story of the work there simply and entertainingly. There are no heroics. The translation leaves the Gallic flavor undisturbed. Though the book contains little of value to the military man, it makes interesting reading.

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MEMORIES OF THE WORLD WAR, by Robert Alexander, Major General, U. S. Army, Retired. Published by the MacMillan Company, New York, 1931. $4.00.

In a foreword the author states that he has two objects in view in presenting these "Memories" to the public; one, to tell the unvarnished truth, and secondly, to record his appreciation of the devoted service and the determined valor of the troops with whom he was associated. He accomplishes his purpose well, and the reader will find in the pages of General Alexander's book a clear and interesting description of the work of a combat division.

The author starts his book with a rebuke to President Wilson for not fully preparing the military forces of the United States to enter the war, and consequently causing the deaths of so many soldiers due to untrained leadership. Then follows the author's story of crossing the Atlantic, his arrival in France, training trips to the French and British forces, his duties as commander of a replacement division, and finally his assignment to the command of a brigade in the 32nd Division, and some combat experiences.

In August, 1918, he was promoted to Major General and assigned to command the 77th Division. The 77th made a fine record, and the General gives full credit to both individuals and organizations who helped make that record. He is most positive in all his statements and does not mince his words in discussing either the success or failure of various officers. He gives authentic facts on some disputed questions, and in particular explains the so-called "lost battalion," which in the opinion of the 77th Division was neither lost, nor had to be rescued.

In the opinion of the author far too much time was "wasted" in the instruction of the tactics of "trench warfare," which could have been better and more profitably used in the instruction of minor tactics for open warfare. He is also a great believer in the value of the Command and General Staff School at Fort Leavenworth, and the efficiency of its graduates.

The book is of interest to the general military reader and worth while adding to that ever-growing library of "War books." It is of special interest to veterans of the 77th Division.

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BEDFORD FORREST AND HIS CRITTER COMPANY, by Andrew Nelson Lytle. Published by Minton Balch and Company, New York, 1931. Price $5.00.

Reviewed by Lieutenant Colonel William Waller Edwards, Cavalry.

Why the author has used the term "Critter Company" does not appear, but Bedford Forrest doubtless used it many times—he probably even said "hoss critters"—for he was of the uneducated yeomanry of the South.

This latest biography of General Forrest (there have been five previous ones) is an attempt to depict his development into the most typical strong man of the Agrarian South.

The narrative presents his remarkable career in vivid style. Each chapter is packed full of unusual and thrilling adventures, for this amazingly powerful earnest man had many to draw from.

Forrest's role in the Civil War was of course the most important and dramatic part of his strange eventful life.

The resourceful author has gained sympathy with his brilliant subject by talking to all the old surviving members of his command, and having spent two years beside in going over the "hard turnpikes which once echoed the beat of his horses' hoofs and the wild yells of his riders" he has handled Forrest's military operations with a distinct understanding of each of them.

After his famous raid into west Tennessee in which he cut off Grant's Vicksburg supplies, Forrest was classed by the Confederate Generals in the Southwest merely as a highly successful cavalry raider.

Yet, after reading Lytle's account of the Battle of Brice's Crossroads it is difficult indeed to understand such utter lack of comprehension, for this battle was certainly neither a cavalry raid nor an accident.

When it was too late, they found out at Richmond that Sherman and Grant knew more of Forrest's genius for war than they knew themselves.

The book before us deals him the justice which history owes him but which, alas! he never got at the hands of his superiors.

It is a splendid portrait upon a broad colorful canvas of an American of pioneer stock of tremendous endurance and wonderful courage, who in four years of cavalry leadership, against odds, never knew defeat.

Notes from the Cavalry Board

(Continued from page 52)

ELECTRIC HORSE CLIPPING MACHINES

The Andis Clipper Company, Racine, Wisconsin, has furnished the Cavalry Board a number of electric clippers for test. Four of these machines went into test on November 20, 1930, and others at a more recent date. The Chicago Flexible Shaft Company have also furnished their newest product known as the "Clip-

master'' for test. Both these machines are excellent products and appear to be all that is claimed for them.

The Andis clipper is powered with a well known universal motor, the whole machine being held by a handle in the hand when in operation, thus eliminating the enclosed chain which so frequently breaks. It is equipped with a twenty foot, three conductor rubber covered cord and ground clamp. The switch is mounted on the motor just above the handle, and can be easily operated with the thumb. The tension adjustment is mounted directly over the cutting blades which run on roller bearings. All the working parts are enclosed in an aluminum and metal housing. The weight of the entire machine is three pounds. With this machine one horse was clipped in twenty-one minutes.

The Clipmaster is also powered with a universal type motor, and instead of being held by a handle in operating it, as is the case with the Andis machine, the whole motor is held in the grasp. It has a snug, easy hold, the machine being well balanced in all positions. It is equipped with a rubber covered conductor and ground wire, the ground eliminating the likelihood of either operator or animal receiving a shock through shorting of the motor. The tension is easily adjusted, the machine working on a very light adjustment. The Clipmaster is also a chainless machine. The weight is approximately the same as the Andis.

Blades for both machines have proved very satisfactory and have outlasted the issue blades. The price of these machines is less than that of the issue hand clipper.

RADIO TELEGRAPH EQUIPMENT, TYPE BC-GM-152

On May 4, 1931, four radio receivers, type BC-GM-152 were placed in service test. These receivers are for use by an individual mounted man, and are carried on an improvised hanger made from the ordinary issued McClellan saddle bags, in the same manner in which the saddle bags are carried. The receiver is mounted on an improvised leather hanger which replaces the near saddle bag, the batteries being placed in the off bag, the electrical connections being made by means of a four-conductor lightly armored cable which goes over the horse's back. The antenna is a telescopic Bristol steel fishing rod, mounted in a guidon stirrup, the set being grounded to the metal case in which it is mounted. The wave length band of the BC-GM-152 is 200-1200 meters. (1500-250 kilocycles.) This permits inter-communication between the SCR 109, 127-130, the Air Corps SCR 134, and these sets.

These sets were tested during the spring maneuvers of The Cavalry School to assist in determining whether or not they satisfy a definite tactical requirement, for use on a mounted man as a ''contact'' or ''control'' set between advance reconnaissance detachments or patrols and main bodies. They were satisfactory to a distance of approximately thirty miles, which is the greatest distance at which they have thus far been tested by the Cavalry Board.

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THESE ARE NOT PAID ADVERTISEMENTS

Logic

(Continued from Page 13)

III.

Dusk the same evening found the War Correspondent sitting on the banks of a river, feeling more tired than he ever remembered in his life. He had come fast and far since he had watched the attack of the cavalry division at dawn that morning.

It was a typical Eastern river. The bed was formed by a depression about half a mile wide and thirty feet below the level of the surrounding plain. At this time of year the river flowed in three or four main streams, and many smaller channels, some quite shallow, some just fordable by a man on a horse.

Immediately below the spot where the War Correspondent was sitting was a long column of cavalry with machine guns in pack fording the stream. The shallowest places were marked with flags, and the column twisted and turned like a long brown snake. But even so he could see that in places the water was half way up the saddles, and that the horses had some difficulty in keeping their feet. On the bank to his left were six-wheelers unloading ammunition, reserve machine guns and wireless sets, which were being loaded on to rafts and poled across the streams to the usual accompaniment of cat calls and witticisms of the British soldier, delighting in a job outside his usual routine.

In rear of the last squadron came Bonzo's battery; the little howitzers almost disappearing completely under the water in the deeper channel, but the teams seeming to find less difficulty than the cavalry horses, possibly because they were held together by the harness.

Bonzo drew out to watch his teams across.

"Hard day on the skins; still they don't look too bad do you think? We are going across now with the mounted regiments to form the bridgehead. It will be at least twenty-four hours before this river is bridged for any of the mechanized stuff. Now you see why we are not mechanized. We are the close support weapon, and it is our boast that we can go anywhere where a man on a horse can get. It is after all only logic."

Foreign Views on Mechanization

(Continued from page 40)

the road net into account; fortified works will have a relation to it.

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The *Voie Sacrée* (Bar-le-Duc to Verdun) showed that automobile transport could replace the railroad over short distances.

The French had an important strategic reserve of portée artillery.

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As to the technique of employment, two methods:

First Method: The new engine may be incorporated into the existing organizations, that is into the large units, Infantry divisions or Cavalry divisions, whose elementary cell is the foot-soldier or the horse. The latter impose their specific possibilities of speed and of muscular fatigue on these large units.

* * * * * * * * * *

The Cavalry division has rightly maintained, in spite of new additions of power, its old type of organization, as long as the horse alone was capable of carrying the scout and the combatant of high speed in all types of country.

However, lately, a new engine has appeared; the rapid reconnaissance car for all terrains, which constitute, a formidable competitor for the mounted scout and combatant.

Second Method: The authorities will free themselves from servitude to existing organization and will seek a technique of employment using fully the properties of the new engine, considered as a supplementary element of force for the army.

With reference to a new engine susceptible of being utilized in war, this method consists in discarding the idea of incorporating it into the existing organizations and in seeking a technique of employment permitting the exploitation of all its specific qualities of power, speed, radius of action, etc. This research may result, as has been the case with aviation, in the *organization* of *new* units or services superimposed on the existing combatant arms.

Considering the poor results obtained by the first experimental method in the large cavalry unit, one wonders if the research procedure applied to aviation should not be used for the motorized vehicles adapted to *all terrains* which have just made their appearance in France and England and certain of which are in service or on trial in our army.

* * * * * * * * * *

Far from being the condemnation of the Cavalry, the motorized engines constitute for it the opportunity for a resurrection, in which, with formidable means at its disposal, the Cavalry spirit will be able to amplify infinitely its innate qualities of boldness, skill and heroism.

The second method of research should, therefore, be used to determine the technique of employment of a motorized group resuming the mission of the old homogeneous Cavalry division; the procedure to be followed has been traced by the steps taken in military aviation.

* * * * * * * * * *

The problems of security which arise from an adversary's possession of such a force will be met by motorized forces, which will act like *divisional cavalry.*

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The application of the second method will lead to the possible and necessary resurrection of the independent cavalry of the heroic epochs of that arm, as well as to the resumption, under a form astonishingly amplified, of cavalry security missions. Such research seems to be quite urgent.

The United States Cavalry Association

Organized November 9, 1885

DESIGN

1. The aim and purpose of the Association shall be to disseminate knowledge of the military art and science, to promote the professional improvement of its members, and to preserve and foster the spirit, the traditions, and the solidarity of the Cavalry of the Army of the United States.—*Article III of the Constitution.*

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Membership shall be of three classes, which, together with the conditions of eligibility therefor, are as follows:

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(2) Associate, for which all present and former commissioned, warrant, and non-commissioned officers of honorable record of the military or naval services of the United States not included in class I shall be eligible.

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Application for membership, showing present or former military status, should be addressed to the Secretary, U. S. Cavalry Association, 1624 H Street, N. W., Washington, D. C., and be accompanied by remittance of dues for one year.

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Hourly Halt of Troops in the 1st Cavalry Division Maneuvers Near Lee's Ranch in the Sacramento Mountains of New Mexico.